DOCUMENT RESUME

ED 261 933 SO 016 803

AUTHOR Morton, John S.; And Others
TITLE Teaching Strategies: High School Economics Courses. Master Curriculum Guide in Economics.
INSTITUTION Joint Council on Economic Education, New York, N.Y.na
PUB DATE 85
NOTE 193p.
AVAILABLE FROM Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016 (JCEE Checklist No. 346, $14.00; quantity discounts available).
PUB TYPE Guides - Classroom Use - Guides (For Teachers) (052)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS Course Descriptions; Course Organization; *Curriculum Development; Economics; *Economics Education; Evaluation Methods; Fundamental Concepts; High Schools; Learning Activities; Lesson Plans; Media Selection; Organizations (Groups); Resource Materials; Student Evaluation; *Teaching Methods; Units of Study

ABSTRACT

Economics lessons and suggestions on how to organize and teach high school economics courses are provided. An overview discusses how to organize an economics course, key economic concepts, how to choose instructional materials, and how to evaluate students. A bibliography of resource materials and addresses of resource organizations are also included. The bulk of the guide contains the economics lessons. Information provided for each lesson includes time required, concepts, objectives, rationale, materials needed, procedure, and evaluation procedures. Lessons deal with the following topics: scarcity, choices, and decisions; organizing an economy; circular flow of economic activity; productivity; supply and demand; equilibrium price and quantity; the allocation of resources by markets; price ceilings and floors; responsiveness of quantity demanded to price changes; third-party costs and benefits; competition; marginalism; indicators of economic performance; economic goals; inflation; the Federal Reserve; fiscal policy; why economists disagree; specialization; and foreign currencies. A sample outline of a one-semester high school course in economics concludes the guide. (RM)

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MASTER CURRICULUM GUIDE IN ECONOMICS

TEACHING

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SO 016 803

MASTER CURRICULUM
GUIDE IN ECONOMICS

TEACHING STRATEGIES

HIGH SCHOOL ECONOMICS COURSES

John S. Morton, Chair
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The Joint Council on Economic Education is extremely grateful to the members of its Publication Committee who reviewed the manuscript of this volume. However, responsibility for the published version rests with the authors and publisher.

5 4 3 2 1

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Foreword

Teaching Strategies for High School Economics Courses is one component of the Joint Council on Economic Education's *Master Curriculum Guide in Economics*. The basic publication in the volumes that constitute the guide, *A Framework for Teaching the Basic Concepts*, presents a conceptual structure of economics, and provides examples of how that structure can be used to analyze economic problems. The other volumes of the guide are directed at specific levels and/or basic subject matter taught in the nation's schools.

The present volume, *Teaching Strategies for High School Economics Courses*, is designed specifically for use by high school teachers who give a course in economics. This guide will be particularly helpful in the many states as well as the local school districts that require students to complete a "free-standing" economics course prior to graduation from high school.

Like all JCEE materials, *Teaching Strategies for High School Economics Courses* provides a basic outline for a variety of approaches to a course, for the Joint Council believes that classroom teachers must adapt materials and strategies to meet the particular needs of their own students and schools. Course materials that do not allow for flexibility preclude teachers from using their own ingenuity and, just as important, hamper them from adjusting courses to meet local needs. Hence, while this guide contains a number of teaching units ready for classroom use, individual teachers may want to change or adapt the lessons. Another important feature of the guide is that it contains suggested strategies with different means of teaching different kinds of students in a variety of settings.

The Master Curriculum Project has been made possible by generous contributions from many dedicated sponsors. We deeply appreciate the confidence they have thereby expressed in the economic education movement. This volume was mainly suported by the generosity of the Shell Companies Foundation, Metropolitan Life Foundation, and Exxon U.S.A.

MICHAEL A. MACDOWELL
President, JCEE

Preface

The *Master Curriculum Guide in Economics* (MCG) is designed to assist school systems with curriculum development in economics for grades K–12. It can also be used by individual teachers as a resource to help present economics to students, while teacher-educators can use it in workshops and other training activities. The MCG includes (1) *A Framework for Teaching the Basic Concepts* and (2) separate volumes of *Teaching Strategies* that provide detailed classroom-tested lessons illustrating how the basic economic concepts can be taught at different grade levels and in different courses.

The *Master Curriculum Guide in Economics* is a product of the Developmental Economic Education Program (DEEP) of the Joint Council. Working documents, prepared for a 1964–69 DEEP experiment in curriculum change, contained a list of economic concepts that ought to be taught to students by the time they finish high school, along with suggestions for grade placement of the concepts. The concepts selected were drawn from the *Task Force Report on Economic Education in the Schools* (1961). During the 1960s and early 1970s, literally hundreds of curriculum guides and lesson plans were developed on the basis of DEEP publications, and through them, thousands of teachers and students were introduced to economics education.

At the annual meeting of the National Association of Economic Educators in 1975, many JCEE council and center directors urged the Joint Council to undertake what later became the Master Curriculum Guide project. Subsequently, a committee headed by W. Lee Hansen, professor of economics at the University of Wisconsin–Madison, developed the *Framework for Teaching Economics: Basic Concepts*. It was published in 1977. A second edition of the *Framework*, which built on experience with the first edition and new developments in economics, was published in 1984. June V. Gilliard, director of curriculum and instruction for the Joint Council, contributed importantly to the design of the *Framework*, as she also has to the *Teaching Strategies* volumes.

Teaching Strategies for High School Economics Courses is the most recent of the nine volumes so far published in the *Teaching Strategies* series. The present volume contains suggestions on how to organize and teach high school economics courses plus lessons that can complement a variety of textbook-oriented syllabi. The lessons can be organized to supplement units on economics problems or issues or can be used as core content in courses shaped by state mandates.

Teaching Strategies for High School Economics Courses was prepared by a writing team under the leadership of John S. Morton, director of the Center for Economic Education, Governors State University, and economics instructor at Homewood-Flossmoor High School, both located in Illinois. We are indebted to him and his associates for the imagination and effort they put into producing this volume. The Joint Council editorial staff ably prepared this work for publication.

S. Stowell Symmes
Director, DEEP Office
Coordinator, Master Curriculum Guide Project

Acknowledgments

Many people assisted in the preparation of this teaching guide. The following educators read drafts of the overview and/or lessons and wrote extensive critiques of the manuscript. Their assistance contributed a great deal in revisions of the manuscript. We are grateful for their help.

Carol Adams, Council on Economic Education in Maryland, Towson State University
Thomas Bonsor, Eastern Washington University
Jean Caldwell, Central State University, Oklahoma
Joyce Gleason, Nebraska Council on Economic Education, University of Nebraska–Lincoln
Gail Hawks, Ashland College, Ohio
Don R. Leet, California State University–Fresno
John Manzer, Indiana University–Purdue University at Fort Wayne
Margaret Murphy, Johns Hopkins University, Baltimore, Maryland
Anne E. Pooler, University of Maine at Orono

We would like to thank the following teachers and administrators who tested lessons with their classes or read the lessons and commented on them. Their criticisms and suggetions led to significant changes in the lessons' content and format.

Carol Allen, Fayette Public Schools, Missouri
Paul Amspaugh, Walnut Hills High School, Cincinnati, Ohio
Ronald Boehm, Pekin Community High School, Illinois
Judith Bristol, Houston Independent School District, Texas
Gary Caldwell, Omaha Public Schools, Nebraska
Mary Alice Chapin, Washington City Schools, North Carolina
Sue Devero, Southside High School, Fort Smith, Arkansas
Dana Duenzen, Woodbridge High School, Irvine, California
Ruth Faulkner, Cleveland Public Schools, Ohio
Joseph Genza, Norwalk High School, Connecticut
Lyle Hendricks, Farrington High School, Honolulu, Hawaii
Stephanie Hirsh, Richardson Independent School District, Texas
Kym Husom, Edgewood High School, Madison, Wisconsin
William Jassey, Norwalk Public Schools, Connecticut
Carl Jette, Nicolet High School, Glendale, Wisconsin
Kathleen Ryan Johnson, Rufus King High School, Milwaukee, Wisconsin
Patty Main Knott, Washington City Schools, North Carolina
Steven Kunke, Corvallis High School, Oregon
Mary Todd MacKenzie, Washington City Schools, North Carolina
Lanney Martin, John Rogers High School, Spokane, Washington
John McGinnis, Abraham Lincoln High School, Philadelphia, Pennsylvania
Linda McPheron, Pinellas County Schools, Florida
Ron Pilz, St. Genevieve, Missouri
David Ross, Burke High School, Omaha, Nebraska
Joseph Rueff, Elkhart Community Schools, Indiana
David Smith, Thornton Township High School, Harvey, Illinois
Warren Solomon, Missouri Department of Elementary and Secondary Education
Howard Spicer, Homewood-Flossmoor Community High School, Illinois
William Stepien, Dundee Community School District, Illinois
Dora Sutton, Canton School District, Ohio
Pat Tomita, Kahului, Hawaii
Charles Whitley, Washington City Schools, North Carolina
Ken Yagoda, Seminole High School, Florida

TEACHING STRATEGIES

HIGH SCHOOL ECONOMICS COURSES

OVERVIEW

With increasing frequency, Americans must debate and make crucial decisions about our complex economy. Major social and economic issues are discussed in homes, schools, and colleges, as well as in Congress, state legislatures, city halls, political campaigns, and the news media. Nevertheless, the American public, because of its insufficient knowledge of economics, is often confused about the nature and causes of those issues and has difficulty understanding national debates about them.

Economics is a way of thinking about the economy by using a set of analytical tools. These tools help us understand how the economy operates and what the consequences of various approaches to solving economic problems might be. The goal of high school economics courses is to teach students how to apply the tools of economic analysis to the personal, community, and national economic issues students face. The basic economic problem is scarcity: the condition that results from the imbalance between relatively unlimited wants and the relatively limited resources available to satisfy those wants. Because scarcity exists, it is necessary to make choices and trade-offs among desired uses of our limited resources.

As an economics teacher, you also face your own scarcity problem. You have limited time, and there is so much to teach. The goal of *Teaching Strategies for High School Economics Courses* is to help you use your scarce time more efficiently.

Each section of this overview has a specific purpose. "Organizing a High School Economics Course" contains suggestions on how to use our sample outline for a one-semester high school economics course (see Appendix) to shape your own course. "Key Concepts for a High School Economics Course" presents a brief review of the concepts students should learn in order to achieve a basic understanding of economics. "Choosing the Textbook and Supplementary Material" contains guidelines for choosing a textbook and locating films, computer software, instructional activities, and other supplementary material. "Evaluating Students in High School Economics Courses" presents practical suggestions for systematically assessing your students' progress. "Help! A Brief Bibliography and Address Book" includes the names and addresses of the organizations from which all the materials mentioned in previous sections may be obtained.

The heart of the guide is the instructional activities. They are designed to complement your textbook and classroom lectures and include worksheets, readings, case studies, problem-solving activities, simulations, role playing, and the use of inquiry. Several of the instructional activities require the higher cognitive levels of learning. Most take one or two class periods; virtually everything you need to do each activity successfully is included.

I ORGANIZING A HIGH SCHOOL ECONOMICS COURSE

There is no "best" way to organize a one-semester course in economics. The way you organize the course depends on your textbook, your teaching experience, state guidelines and/or mandates, your students' intellectual abilities, their background in economics, and the relative emphasis you wish to place on various aspects of economics.

Before starting the task of planning an economics course, contact your nearest Center for Economic Education. There were some 260 centers in operation at colleges and universities throughout the United States as this publication was being prepared for press. Each center is affiliated with its State Council of Economic Education and with the national Joint Council on Economic Education (JCEE). The centers have most of the resources mentioned in this guide, and they can assist you in setting up your course. Write to the JCEE if you do not know the location of the nearest center. The JCEE's address, as well as information on other materials mentioned in this section, appears in section V, "Help," which begins on page 16.

Using the Outline

The outline at the back of this publication provides one possible way of organizing a single-semester course. The units are fairly long because we believe it is easier to subdivide an existing unit than to combine units. The units are organized around the concepts in the *Master Curriculum Guide in Economics: A Framework for Teaching the Basic Concepts* (Joint Council on Economic Education, 1984). A list of appropriate lessons in Joint Council publications, including this high school *Teaching Strategies* guide, follows the unit

description in the outline. The lists give you a choice of almost 150 inexpensive activities, all of them available from a single source.

Here is how to get the most from the outline.

1. Examine the concepts and content of each unit, and, if necessary, modify it to meet your needs. Does the time recommended for each major topic (designated by roman numerals) represent the emphasis you wish to place on that topic? Do you want to subdivide some units into smaller sections or rearrange them in another way? If you are already teaching an economics course, does the outline contain some important concepts you have been omitting? (Of course, it may make sense to skip some of the concepts for the particular course you teach.)

2. Review the lessons in this guide, and choose the ones you want to use. These activities utilize a variety of instructional approaches and assume different student backgrounds in economics and different levels of ability. Teachers may not necessarily use every lesson.

3. Check the other activities available from the Joint Council on Economic Education to see which would be useful for your course. For example, activities from *Teaching Strategies: Junior High School Level (Grades 7–9)* may be appropriate for students with lower ability or for courses taught in ninth or tenth grade. Because some of these activities were designed to be integrated into U.S. history, world studies, consumer education, business education, and political science courses, be sure to coordinate your curriculum with other teachers in order to avoid repetition. Even though these lessons are also appropriate for a high school economics course, students may have been exposed to them already.

4. Organize your units in a loose-leaf notebook. Start with your own revised outline of each unit, and place the activities you consider appropriate after the outline of each unit. Any activity listed applies to at least one of the concepts listed in the unit. As soon as you read the activity, the concepts it covers and its appropriateness to your course will be apparent. Of course, you are not limited to the activities listed here. There are many good activities available from other sources, and some of the sources for these activities are listed in section III, "Choosing the Textbook and Supplementary Material" (see page 9).

Customizing the Economics Course

There probably will never be a single "model" high school economics course that all schools would or should adopt. The economics course that is actually given depends on the students and on the content, organization, emphasis, and duration of that course. Is it for gifted or underachieving students? Is it for the college-bound or for those whose formal education is ending? Is it for urban or rural students? Is the course required or elective? What are the students' backgrounds in economics?

Thus, there are many possibilities. For example, one school might create an elective, two-semester course for superior students with the expectation that they will receive advanced placement college credit. Another school might teach a one-semester course in consumer economics for potential dropouts.

The suggested outline represents an eclectic approach to economics. It emphasizes decision-making and focuses on the economics helpful to the average person. It presents the tools of the economist to help students analyze economic problems in the same manner as economists. It assumes that good citizenship presupposes an understanding of economics, knowledge about how the economy works, and the ability to assess how well the economy performs. You may prefer to modify the outline to provide a different emphasis. Here are some other approaches.

Consumer economics covers the usual economic topics such as decision-making and the market system as well as consumer concerns such as budgeting one's income, selecting insurance, obtaining credit, and making purchasing decisions. Because it analyzes economic life from the perspective of the individual and has a practical, down-to-earth approach, consumer economics may be especially interesting to high school students.

Free-enterprise education focuses on the distinctive characteristics (private property, freedom of contract, competition, the profit motive, minimal government regulation) and the structure of the private-enterprise system. It involves acquainting students with other economic systems as well as with domestic and international challenges to the economy of the United States. The goal of the approach is to give students the knowledge, attitudes, and skills that will help them to preserve and extend a private-enterprise system rather than give them a set of tools with which to examine and think about the economy.

Global economics stresses responsible citizenship and participation in our global society. The idea of a "world economy" is manifest in the growth of multinational corporations, increas-

ing world trade, and in the development of international business, professional, scientific, and cultural links. Economics with a global perspective includes the basic principles, concepts, and skills taught in other approaches, but places more emphasis on world trade and commercial policy, developing economies, and global economic problems.

Citizenship economics is concerned with training students to participate actively and intelligently in civic issues that involve questions of economics. Students need both economic knowledge and critical-thinking skills in order to make informed choices on such issues.

II KEY CONCEPTS FOR A HIGH SCHOOL ECONOMICS COURSE

The course outline in the appendix is based on concepts that should serve as the foundation for high school economics courses. This section provides brief explanations of those concepts and demonstrates how they can be used in decision-making. The explanations rely heavily on the second edition of the *Master Curriculum Guide in Economics: A Framework for Teaching the Basic Concepts* (Joint Council on Economic Education, 1984) where more detailed explanations of many of the concepts may be found. Figure 1 is a table of these concepts.

The general objective of the high school economics course outlined in the appendix should be to enable students to use economic concepts in a reasoned, careful manner in dealing with the personal, community, and national economic issues students confront or will confront. It is helpful to use the concepts in a decision-making model. At the end of this section are examples of decision-making at both the microeconomic and macroeconomic levels. Teenage unemployment is the micro example; tax indexation is the macro example.

The Basic Economic Problem—Scarcity, Choices, and Opportunity Cost

All societies have access to a limited quantity of resources that can be used to produce goods and services with which to satisfy people's wants. More specifically, at any one time each society has a given amount of labor, capital, and natural resources. In every society, people's wants for the goods and services produced by these resources seem to be greater than what can possibly be produced. This condition is called scarcity, the basic economic problem.

Figure 1 Basic Economic Concepts

FUNDAMENTAL ECONOMIC CONCEPTS

1 Scarcity
2 Opportunity Cost and Trade-offs
3 Productivity
4 Economic Systems
5 Economic Institutions and Incentives
6 Exchange, Money, and Interdependence

MICROECONOMIC CONCEPTS

7 Markets and Prices
8 Supply and Demand
9 Competition and Market Structure
10 Income Distribution
11 Market Failures
12 The Role of Government

MACROECONOMIC CONCEPTS

13 Gross National Product
14 Aggregate Supply
15 Aggregate Demand
16 Unemployment
17 Inflation and Deflation
18 Monetary Policy
19 Fiscal Policy

INTERNATIONAL ECONOMIC CONCEPTS

20 Absolute and Comparative Advantage and Barriers to Trade
21 Balance of Payments and Exchange Rates
22 International Aspects of Growth and Stability

MEASUREMENT CONCEPTS AND METHODS

Tables
Charts and Graphs
Ratios and Percentages
Percentage Changes
Index Numbers
Real vs. Nominal Values
Averages and Distributions Around the Average

SOURCE: *Master Curriculum Guide in Economics: A Framework for Teaching the Basic Concepts*, 2nd edition (Joint Council on Economic Education, 1984), p. 11.

Because we cannot do or have everything all at once, we must make choices. Individuals frequently confront their scarce resource of time as in the following example:

> **I cannot use my Friday evening to go to a play and to a movie. I have a limited amount of time; therefore, I must make a choice.**

Much of economics deals with analyzing how and why individuals, institutions, and societies make the choices they do. Every time we make a choice, we must give up something. We give up an

opportunity to do, keep, or acquire something else. Thus, opportunity cost, a key concept in economics, is the forgone opportunity of choosing the next best alternative.

If I decide to go to a play and my next best choice is going to a movie, I give up the movie. My opportunity cost is the movie I could have seen.

Economic Systems

Economic systems institutionalize the manner in which people decide what to produce, how to produce, and for whom to produce. Those are the basic economic decisions every society must make. Different economic systems use different means of answering these questions. The U.S. system relies heavily on markets along with significant amounts of government decision-making to answer the questions. The Canadian economy is broadly similar. Several West European economies rely more heavily on government and less on markets. In other economies, markets play a very small role; most of the economic decisions are made by people in the government. Such an economy is called a command economy.

The Soviet Union is an example of a nation with a command economy in which most major economic decision-making is centralized. Canada's economy is closer to a market economy than is the Soviet Union's, because most decision-making in Canada takes place in the market, and is thus not centralized.

Productivity, Exchange, Money, and Interdependence

A goal of almost every economic system is to continually become more productive, i.e., more efficient. A system thereby uses its relatively limited resources in order to satisfy as many wants as possible, while also attempting to increase its resources. More can be produced through specialization by individuals, business firms, cities, regions, and countries. But specialization means people become more dependent upon one another; people must trade the products they produce for others they need. The division of labor is a particular case of specialization. It refers to the process whereby workers perform only a single or a very few tasks, as when working on an assembly line.

Auto workers assemble a small part of a car, but they earn wages, not the goods and services they want. They must trade for the goods and services they want with the wages they earn.

Barter is not common in the U.S. economy. Instead, the norm is to trade labor for money, using the money to buy goods and services. A primary purpose for using money is to make exchange easier.

You would find it difficult to trade your teaching services for bread, milk, housing, and transportation. Your economic life is much easier because you are paid in money for your services and are able to use this money to buy the goods and services you want.

Markets, Supply and Demand, Market Structure, and Income Distribution

Markets are institutional arrangements that enable buyers and sellers to exchange goods and services. In markets with many buyers and sellers, the prices and levels of production are determined by the interaction of supply and demand. Changes in technology and in the prices of resources will cause changes in supply. Changes in preferences, incomes, population, and in the prices of other products will cause changes in demand. Changes in supply, or demand, or both will cause changes in prices, and in the amounts of a good or service produced.

An increase in demand for health food will raise its price, which results in more production of health food, if everything else remains the same. A change in technology that lowers the cost of production will cause an increase in supply if everything else remains the same. The increase in supply will result in a lower price for the product if everything else remains the same.

Effective competition among buyers and sellers in markets results in what economists call an efficient allocation of resources. That is, resources are used to produce what buyers most want and are willing to pay for. Competition thus forces the producer to use resources in the fashion that wastes them the least. Markets that are not competitive can result in inefficient allocation and use of resources. Prices may be higher and production less than would occur with more competition.

Competition among personal computer manufacturers means that producers attempt to meet consumer desires at the lowest possible cost. If there were only a single

producer of personal computers, the producer would not be forced to satisfy consumers' wants nearly so well.

Markets also determine how most of the nation's income is distributed. In the U.S., wage and salary incomes are set by the interaction of the supply of and demand for people's labor services.

Computer programmers receive higher salaries than unskilled workers because, relative to the number of workers available, the demand for the services of computer programmers is greater than the demand for unskilled workers.

Government and Market Failures

In the U.S., we do not rely totally on market forces to answer the basic economic questions of what to produce, how to produce, and for whom to produce. One reason is that a market system will provide too little of some goods and services and too many of others.

Some goods and services, like national defense, cannot be provided exclusively to those who are willing to pay for them, nor withheld from those who are not able or willing to pay. Another example is the lighting of public streets and roadways. In situations of this kind it is impossible to limit the benefits of the good or service to an individual buyer. Since an individual generally won't buy or supply products under such conditions, the government either buys or produces such goods or services.

The government provides flood controls because the benefits of the service are indivisible and cannot be provided exclusively to those who might pay for it or withheld from those who refuse to pay.

When market prices do not reflect the total cost of production, e.g., in cases in which the production of a good or service results in pollution that is not prevented or alleviated, the price is lower than it would be and production consequently greater than if the costs of averting the effects on third parties were included in the price. In such cases the government may restrict, regulate, or tax production.

Governments pass laws designed to reduce pollution that affects third parties or the public environment. These laws force producers and consumers to pay more or all of the total real costs of making a product.

Some goods and services benefit people other than those purchasing them. When market prices do not reflect the total benefits of a good or service, less will be produced than individuals or society want. In many instances, the government will either produce such goods and services, or subsidize their production in the market.

Governments subsidize elementary and secondary schooling because its benefits to society as a whole are deemed to be significant. Without the subsidy, the private sector would underallocate resources to schooling, since market price determines private-sector supply.

We are not always satisfied with the income distribution that results from the operations of the market economy. Governments, through their spending and taxing, modify the income distribution that a free market produces.

Welfare assistance, Medicaid, food stamps, agricultural subsidies, veteran's benefits, and progressive income taxes are all examples of efforts to modify the income distribution.

Governments also participate in the economy by establishing laws to assure competition and to regulate monopolies in cases where monopoly may be more efficient than competition.

Measurements of the Economy

There are measures to judge the well-being and progress of the U.S. economy. Here are a few: Gross National Product (GNP) measures the value of the economy's total output of final goods and services—commonly for a quarter or a calendar year. Changes in GNP tell us whether and how fast the economy is really growing. Data on employment and unemployment show whether we are using our labor force effectively. Price indexes measure relative changes among particular prices or among groups of prices as well as the general price level. Inflation is a persistent rise in the general price level; deflation is a persistent decline in that level.

Government Macroeconomic Policy

Characteristically, the economy goes through business cycles, that is, periods of prosperity (rapid growth, high employment, and a tendency toward inflation) followed by periods of recession (slow or negative growth, high unemployment, and a tendency toward a stable general price level or perhaps a minor decline in that level), in turn followed by a period of prosperity, and so on. Typically, the

government attempts to reduce such instability, but rarely with complete success. Furthermore, there is controversy regarding both the type of government intervention and the degree to which the government should intervene.

Monetary policy is the responsibility of the Federal Reserve System (the Fed). Monetary policy refers to the attempt to affect the supply of money, and the level of interest rates in the economy in order to help maintain a sustainable rate of economic growth consistent with low unemployment and stable prices. Fiscal policy is the use of government spending and taxing powers to affect the level of aggregate supply and demand in the economy.

In recent decades, as recession took hold, fiscal policy moved toward expansion: the government started to raise its expenditures or lower taxes or did both. Monetary policy acted to make the money supply grow. If prosperity took hold, fiscal policy moved toward contraction: the government started to lower the growth of its expenditures or raised taxes or did both. Monetary policy acted to curb the growth of the money supply.

International Economic Concepts

The American economy does not exist in isolation from the rest of the world. Just as we trade among ourselves, we also trade with individuals and the businesses in other nations. We trade internationally for basically the same reasons as we trade among ourselves. The complication is that countries use different monetary systems. Therefore, when trading goods and services between countries, different currencies must be exchanged for one another in order to make payments. Alterations in the exchange rates for currencies can have a significant effect on the flow of international trade and on domestic economies.

The concept of comparative advantage explains why nations benefit from specialization and from trade with each other. However, some specific individuals and businesses may be hurt. Because foreign competition may cause declines in specific businesses and subsequent unemployment, governments frequently try to restrict imports by placing tariffs and quotas on them, and try to increase exports by subsidizing them.

Free international trade benefits all countries in the long run, but in the short run, some groups are usually harmed more than they are benefited.

Applying Economic Understanding to Specific Issues

When you teach your students economic concepts, your most important purpose should be to enable them to use those concepts to understand how the economy works, to explore economic problems, and to make informed decisions. A logical, reasoned approach to solving any problem, whether economic or not, can be learned through practice. Many of the activities in this guide can provide practice in the use of careful, reasoned analysis.

There are five steps in the decision-making process used in this volume. The steps are listed along with suggestions about how to teach the process to students.

1. **State the problem or issue.**

Before starting an analysis, students must reach a clear understanding of the nature of the problem, and what must be decided.

2. **Determine the personal or broad social goals to be attained.**

With your class, determine what you hope to achieve by solving the problem. These goals might include economic freedom, economic efficiency, economic equity, economic security, full employment, price stability, and economic growth. Depending on the issue, there will be other more specific goals. The class will have to determine some rough order of priority for achieving the goals if there are more than one. Alternative courses of action are evaluated according to how well they meet or fulfill these goals.

Economic goals can also involve personal self-interest, which reflects the concern of individuals for their own well-being and personal values rather than for the broad social goals mentioned above. Broad social goals and individual goals may conflict, and the positions people ultimately take on some economic issues will be affected by the individuals' own self-interest as well as by the weight they put on broad social goals. It is important to try to separate these two types of goals in order to understand why people ultimately reach the decisions they do on economic issues.

3. **Consider the principal alternative means of achieving the goals.**

In some cases, there may be just a few alternatives, but in other cases, there will be many.

4. **Select the economic concepts needed to understand the problem and use them to appraise the merits of each alternative.**

This is the most complicated step in the decision-making model. First, you must determine

which economic concepts are relevant. Next, you must use them to appraise each alternative—that is, to judge how well each alternative meets the stated goals. This is often done by constructing a grid, as the examples that follow will make clear.

5. **Make a decision.**
Decide which alternative best leads to the attainment of the most goals or the most important goal.

Applying the Decision-making Model

The Minimum Wage and Teenage Unemployment—An Issue in Microeconomics Teenagers often have difficulty finding summer work as well as permanent jobs upon graduation. Teenage unemployment is normally higher than adult unemployment and increases drastically during economic recessions. Proposals have been made (and perhaps will be enacted at some time during the period this guide is in print) to lower the minimum wage for teenagers during the summer. Here is how to use the decision-making model to analyze this situation. The discussion is simplified for purposes of illustration.

1. **State the problem or issue.**
Many teenagers cannot find jobs.

2. **Determine the personal or broad social goals to be attained.**
Possible goals are high employment for teenagers, high employment for all others, economic equity or fairness (a difficult concept to apply precisely), and economic freedom. Other goals could be listed.

3. **Consider the principal alternative means of achieving the goals.**
Two major policy options are to reduce the minimum wage for teenagers during the summer or to keep the minimum wage for teenagers equal to the minimum wage for all others. Other alternatives could be listed.

4. **Select the economic concepts needed to understand the problem and use them to appraise the merits of each alternative.**

(a) The *relevant economic concepts* are high employment, supply and demand, levels of productivity (output per person per hour worked), and price floors. Analysis of the alternatives shows that minimum wage laws do not directly affect those labor markets in which the equilibrium wage is above the minimum wage. In markets in which minimum wage laws hold all wages above the equilibrium, all those who are working will have higher wages per hour than the equilibrium. However, because the wages are higher, on the one hand, more people will want jobs, and on the other hand, employers will demand fewer workers. Thus, minimum wage laws cause some unemployment.

Lowering minimum wages for teenagers may mean lower hourly wages for those teenagers who would work for less than the minimum wage. More jobs would become available for teenagers, and perhaps fewer jobs for adults if employers substitute teenagers for adults.

(b) *Appraise each alternative.* Lowering the minimum wage for teenagers would provide more employment for teenagers and perhaps less for all others. If economic fairness means a wage equal to the minimum wage or above, then lowering it is not fair. As to economic freedom, government interference reduces it; the absence of government interference, or less interference, increases economic freedom. A ranking in which a check mark (✓) means the goal is reached and a cross (×) means reaching the goal is hindered might look like this:

ALTERNATIVE POLICIES	GOALS			
	Teenage Full Employment	Adult Full Employment	Economic Fairness	Economic Freedom
Lower minimum wage	✓	×	×	✓
Do not lower minimum wage	×	✓	✓	×

5. **Make a decision.**
Here is where individuals will legitimately disagree. Let's say the only goal important to a student is to increase teenage employment. Then, that student's policy choice is clearly to lower the minimum wage. A student who is more concerned about the unemployment among adults and about keeping wages at least at the current minimum wage would favor maintenance of the minimum wage.

Should Income Taxes Be Indexed?—An Issue in Macroeconomics The indexing of income taxes was scheduled to start with the taxes paid for income earned in the year 1985. As this volume went to press, it seemed likely that indexing would begin. However, whether indexation is delayed or put into effect, the issue will be timely so long as inflation continues.

Indexing taxes means adjusting federal income tax brackets so that individuals do not pay a larger proportion of their incomes in taxes as a result of inflation. Under the progressive income tax, people pay higher tax rates when their income rises. For example, suppose that the tax rate, after adjustments and exemptions, is 20 percent on the first $20,000 of income and is 30 percent on the next $20,000, (the actual tax system is more complex). If a family's income doubles from $20,000 to $40,000, its income tax will increase from $4,000 to $10,000 [($20,000 × .20) + ($20,000 × .30) = $10,000]. If prices double during the same period, the family's "real" disposable income has actually decreased. Here is how it happens. In the beginning, the family had $16,000 after taxes ($20,000 − $4,000). In the second year, its after-tax income was $30,000 ($40,000 − $10,000), but prices had doubled, giving the family a real after-tax income of $15,000 ($30,000 ÷ 2). If tax rates were indexed to the amount of inflation, the doubling of prices would extend the 20 percent rate from the first $20,000 earned to the first $40,000. Then the family's after-tax income would increase from $16,000 to $32,000. Since prices doubled, the family would be just as well off as before: $32,000 ÷ 2 = $16,000.

1. **State the problem or issue.**

Inflation, together with a progressive income tax system, brings increases in income tax payments that cause families to be worse off than before even if their pretax incomes keep pace with inflation.

2. **Determine the broad social goals to be attained.**

Economic fairness and an increase in government revenues are two important goals. There are others, such as reducing the size of government, minimizing taxes, curbing inflation, reducing unemployment, and maintaining economic stability. In the grid that follows, we will limit ourselves to the first two goals.

3. **Consider the principal alternative means of achieving the goals.**

First, determine the policy options. The main options are to index income taxes, or to keep the income tax as it was before 1985. Other possible options are to expand indexing to capital gains; to use "ad hoc indexing," that is, lower taxes every few years to compensate for the effects of inflation; and to adopt a proportional tax system.

4. **Select the economic concepts needed to understand the problem and use them to appraise the merits of each alternative.**

(a) *Relevant economic concepts.* Among them are real and nominal income, disposable income, price indexes, and automatic stabilizers.[1]

One alternative is to index income taxes. This will mean that individuals whose incomes have increased only as much as inflation has will not pay larger portions of their incomes in taxes simply due to the effects of inflation. Thus, these individuals' after-tax "real" purchasing power will remain unchanged. Indexing taxes also means that government tax receipts will not increase as rapidly as they would otherwise. Thus, there might be greater pressure to hold down government expenditures. The effectiveness of the automatic stabilizers would also be reduced with indexing. Another alternative is not to index income taxes. Without indexing, rises in income during inflation that are less than or only as great as the inflation will cause individuals' income tax payments to rise, and will result in a reduction of their "real" incomes after taxes. Government receipts will act as an automatic stabilizer and will rise accordingly.

In this discussion, we are restricting ourselves to two policy options and two goals. The scope of an actual class discussion might be significantly broadened.

(b) *Appraise each alternative.* A ranking using check marks and crosses as in the preceding microeconomic analysis might look like this:

POLICY ALTERNATIVES	GOALS	
	Economic Fairness	Increase in Government Revenues
Index	✓	×
Do not index	×	✓

5. **Make a decision.**

Just as in the case of the minimum wage for teenagers, it is at this point where most legitimate disagreement occurs. If we restrict ourselves to only

1 An automatic stabilizer [is] . . . an economic shock absorber that helps smooth the swings of incomes and prices without constant changes in government policy. Personal and corporate income taxes and unemployment insurance are among the most important automatic stabilizers in the U.S. When business begins to sag, the government's income tax receipts immediately decline by a larger proportion than personal income, and payments to the unemployed rise. Thus, consumer buying power is strengthened, and recessionary pressures are tempered. Social security and farm-aid programs also act as built-in stabilizers. In combination, these stabilizers have been credited with a key role in the prompt reversal of U.S. recessions since World War II. . . . (From *The McGraw-Hill Dictionary of Modern Economics: A Handbook of Terms and Organizations*, 2nd ed., New York, 1973.)

two goals, the trade-off is very clear and simple. Expanding the policy options and goals would make the decision-making more difficult.

Students will learn to analyze problems best through practice. With an understanding of the basic economic concepts outlined in this overview and with sufficient practice, students can be helped to become effective decision-makers.

III CHOOSING THE TEXTBOOK AND SUPPLEMENTARY MATERIAL

The Textbook

After you have determined the aims and objectives of your course, it's time to select the text. A good textbook provides order for your students and serves as an organizing tool for you.

Evaluating a textbook is never easy. In fact, selecting a text is a type of decision that lends itself to the use of the model for economic decision-making. Here are some suggestions that go beyond evaluating a text's visual appeal and that should help you increase your chances of making a good choice.

1. DOES THE TEXT COVER THE CONCEPTS YOU WISH TO TEACH? A good start is to compare the concepts in *A Framework for Teaching the Basic Concepts* with the content of the text. Figure 2 provides a shortcut method. The basic *Framework* concepts are listed in the first column, and you can write the chapter titles as heads for the remaining columns. After you have checked the appropriate box for each concept covered in a chapter, you can determine which concepts are stressed, and which are lightly covered or omitted entirely.

Equally important, however, is finding out whether the concepts are used correctly. Are the definitions or explanations of the concepts consistent with those in the *Framework* or other authoritative sources? Do the examples and illustrations relate to the generalizations? Do biases distort the presentation? You might be able to answer such questions by closely examining selected chapters.

2. WHAT LEARNING STRATEGIES DOES THE TEXT EMPLOY? Texts seldom rely on a single approach to teaching. You should feel comfortable with the pedagogical mix in yours. Here are capsule descriptions of two types of learning strategy, one didactic and the other based on inquiry.

Didactic texts first preview information, then they describe it, and then they summarize it. Students aren't asked to do much with the ideas. This approach often covers the basics, but teachers must add their own activities if they wish to teach at higher cognitive levels.

In texts that concentrate more on *inquiry*, questions in each chapter feature discussions, group activities, and individual projects. The activities frequently involve making policy decisions and highlight value conflicts.

3. WHICH APPROACHES TO ECONOMICS DOES THE TEXT EMPHASIZE? Some of the approaches to teaching economics were briefly described above in "Organizing a High School Economics Course." The consumer or personal economics approach assumes students need to learn personal economics skills to function as consumers, employees, and family managers. Citizenship economics regards knowledge about the forces, mechanisms, and institutions that govern use of society's resources as essential to good citizenship. Free-enterprise education concentrates on the virtues of the free-enterprise system. Economics from a global perspective emphasizes world interdependence.

Your text should emphasize the approach or combination of approaches you prefer. Most courses just labeled "economics" are geared to the citizenship approach. Courses for middle- and higher-ability students should also delve into the economic analysis presented with greater formality or complexity in the more rigorous texts used in college introductory courses.

4. IS THE SUPPLEMENTARY MATERIAL USEFUL? The teacher's guide for the textbook should give useful suggestions and provide lists of additional resources. The tests should not ignore measurement of higher cognitive levels. Workbook exercises should require more than memorization, drill, and regurgitation of facts, and should stress an economic way of thinking.

5. WILL THE TEXT APPEAL TO STUDENTS; WILL THEY UNDERSTAND IT? The layout should create interest. A text should have appropriate photographs and illustrations. Students should want to read their textbook.

They must also be *able* to read their textbooks. Many teachers and administrators check the readability of texts with a formula. These formulas are based mostly on sentence length and the number of syllables per hundred words. Some formulas differentiate between "familiar" and "unfamiliar" words. Campbell McConnell, in an article evaluating college economics texts, states that these formulas are misleading. He points out that "short statements can be incomprehensible while long statements can be easy to understand by virtue of their length." What can be implied in a short sen-

FIGURE 2 Worksheet for Comparing Textbook Content with Checklist of Important Economic Concepts

	Chapter Numbers/Titles								
FUNDAMENTAL ECONOMIC CONCEPTS									
1 Scarcity									
2 Opportunity Cost and Trade-offs									
3 Productivity									
4 Economic Systems									
5 Economic, Institutions and Incentives									
6 Exchange, Money, and Interdependence									
MICROECONOMIC CONCEPTS									
7 Markets and Prices									
8 Supply and Demand									
9 Competition and Market Structure									
10 Income Distribution									
11 Market Failures									
12 The Role of Government									
MACROECONOMIC CONCEPTS									
13 Gross National Product									
14 Aggregate Supply									
15 Aggregate Demand									
16 Unemployment									
17 Inflation and Deflation									
18 Monetary Policy									
19 Fiscal Policy									
INTERNATIONAL ECONOMIC CONCEPTS									
20 Absolute and Comparative Advantage and Barriers to Trade									
21 Balance of Payments and Exchange Rates									
22 International Aspects of Growth and Stability									

tence can be explained in a long one. Long sentences involve greater redundancy and offer more clues to their meaning.

In checking readability, it may pay to take a more comprehensive approach. Here are a few points described by Judith Irwin and Carol A. Davis in an article in the *Journal of Reading*. They have been modified for economics.

1 Are the assumptions about the students' vocabulary knowledge appropriate?

2 Are the assumptions about the students' prior knowledge of economics appropriate?

3 Are abstract economic concepts accompanied by concrete examples?

4 Are new economic concepts introduced one at a time with sufficient examples of each?

5 Are the main ideas of paragraphs, chapters, and subsections clearly stated?

6 Does the text avoid irrelevant details?

7 Does each chapter have a clear, explicit, and simple organizational structure?

8 Does the text provide opportunities for students to practice using new words?

9 Do the end-of-chapter discussion questions go beyond simple recall of facts?

10 Is the writing style of the text appealing to students?

Films, Videos, and Filmstrips

The best source of leads for good audiovisual materials is *Audiovisual Materials for Teaching Economics* which reviews materials from many sources. Each item listed has been evaluated by at least two people, and there is a copy of the evaluation form in case you want to do your own reviews. This booklet, which is updated every few years, covers materials from kindergarten to adult levels and is published by the Joint Council on Economic Education.

The JCEE, the Canadian Foundation on Economic Education (CFEE), and the Agency for Instructional Technology (AIT) produced a twelve-part instructional television series called *Give & Take*. The series covers important concepts such as scarcity, opportunity cost, derived demand, human capital, public goods and services, supply and demand, and market structure. Although some of the programs are more appropriate for consumer economics courses, most could easily be integrated into a high school economics course. If you are in a state that joined the consortium that financed the series—only seven states did not—you are free to copy the tapes and the accompanying instructional materials.

The JCEE, AIT, and the U.S. Internal Revenue Service (IRS) have released six programs, available in either film or video format, which are designed to help students understand how taxation influences decisions people make. *Tax Whys: Understanding Taxes* links issues in taxation to the high school curriculum in subjects such as social studies, business education, consumer education, and economics. Call your State Department of Education or your nearest Center for Economic Education for further details on both *Give & Take* and *Tax Whys*, and how to gain access to the tapes and collateral print materials.

Computer Software

More and more publishers are preparing computer software for economics courses. As with any new product, computer software may promise more than it can deliver. A key question to ask before purchasing software is whether you can achieve the goals of your course significantly better with computer-assisted instruction than with more traditional materials. A workbook on a screen is poor utilization of high technology.

When you evaluate software, consider such factors as curriculum fit, objectives, economic content covered, accuracy of economic content, reading level, student interest, graphics, and clarity of instructions. A good program should monitor student progress, provide remediation, and use positive statements to reinforce student learning. Some experts advise buying only programs that are a year or more old because new programs often contain programming errors. Furthermore, a program should be tested with students. Does it interest them? Does it really teach, or does it leave the students confused?

New computer-based learning materials in economics, titled *Income-OutcomeS*, developed by the Joint Council on Economic Education, the Canadian Foundation on Economic Education, and the Agency for Instructional Technology, are scheduled to be released in late 1985. The series, which comprises eight units, utilizes highly interactive gaming and simulation formats to present such key economic ideas as the circular flow mechanism, the sources of economic growth, the roles of investment and of the government in that growth, and the part played by the banking system in channeling savings into investment. Also covered are the effects of monetary and fiscal policy on key eco-

nomic indicators, e.g., GNP. One unit will be on international trade.

All the activities use economic reasoning and decision-making models to help students structure their applications of key concepts to specific problems.

The computer activities and the accompanying print materials for students and teachers have all been field tested. Contact the Council and Centers for Economic Education and the education department in your state for further information.

Supplementary Material

The JCEE *Checklist* catalogs a storehouse of materials useful for high school economics courses. The lessons in the other *Teaching Strategies* and in the *Economics-Political Science Series*, combined with the lessons in this volume, will provide you with many classroom activities to propel your course beyond textbook activities. (The JCEE activities in these publications are listed in the sample course outline at the back of this book.)

Four of the other *Teaching Strategies* are particularly useful. The strategies guide for *Basic Business and Consumer Education* contains eighteen instructional activities. *Using Economics in Social Studies Methods Courses* presents economics lessons that illustrate the inductive and deductive approaches to learning concepts as well as lessons that illustrate inquiry, skills learning, and value analysis. Some of the lessons in each section are suitable to use at the high school level. The strategies book for the junior high school level has many activities that might be appropriate for high school students. This is particularly true if you teach economics in the ninth or tenth grade or have lower-ability students. *Consumer Economics* contains seventeen activities designed for high school consumer economics courses. The activities stress decision-making and the consumer, how a market functions, how government actions affect the consumer, and the interrelationships among government, business, and consumer decisions.

The JCEE's *Economics-Political Science Series* consists of six resource guides focusing on the economic-political analysis of contemporary public policies and issues. The subjects covered are tax policy, crime control, government regulation, health care policy, growth policies of developing nations, and inflation and its control.

The Federal Reserve Banks provide a variety of booklets, films, filmstrips, and videotapes. Write your nearest "Fed" for *Public Information Materials of the Federal Reserve System*, a comprehensive guide to the materials disseminated by all the Federal Reserve Banks.

Statistical Sources

To keep your course current, you need the latest economic statistics. Any published lesson that uses economic statistics rapidly becomes dated, but if you add the latest statistics on the subject, you can continue to use these lessons with maximum effect.

The handiest comprehensive source of current economic data is the *Economic Report of the President*, issued every February. In addition to an assessment of economic conditions by the President's Council of Economic Advisers, the report includes an appendix that contains more than 100 tables of pertinent statistical data.

If you desire even more recent data, the blue pages of the *Survey of Current Business*, issued monthly by the U.S. Department of Commerce, are a comprehensive source of recent annual and monthly or quarterly data. The *Survey* also presents special articles and statistics about such matters as GNP, corporate profits, inventories, international trade and the balance of payments, as well as information on regions or states and localities, etc. *Economic Indicators* is a briefer and more convenient monthly compilation of important economic statistics. It is issued by the Joint Economic Committee of the U.S. Congress and prepared by the President's Council of Economic Advisers.

The Monthly Labor Review, published by the U.S. Bureau of Labor Statistics (BLS), contains articles on a variety of labor and economic topics. In addition, there are statistics on labor and business conditions including employment, unemployment, wages, productivity, producer prices, and consumer prices. Your regional office of the Bureau of Labor Statistics can also put you on a mailing list to get information on the latest Consumer Price Index for the nation and your metropolitan area as well as other statistics and information that the BLS issues.

The Federal Reserve Bulletin features articles on a variety of economic topics. A separate section provides statistics related to the financial as well as other sectors of the economy. The Federal Reserve Bank of St. Louis periodically publishes two compilations: *National Economic Trends* for data on employment, the unemployment rate, GNP, industrial production, and the like, and *Monetary Trends* for data on the nation's money supply, bank loans, interest rates, the federal debt, and the federal budget. Write to the Federal Reserve Bank of St. Louis to be placed on the mailing list.

Finally, the Census Bureau publishes the *Statistical Abstract of the United States: National Data Book and Guide to Sources*. It is issued annually

and contains over a thousand pages of statistics and sources of information on the American economy. It also has some data on foreign economies.

Free Curriculum Materials and Services

An economics teacher can be overwhelmed by offers of free materials and services from banks, corporations, government agencies, trade associations, and labor unions. You should be concerned about using materials advocating a particular point of view. However, there are three good reasons why you may want to use sponsored resources from time to time in your lessons.

In the first place, sponsored instructional materials and services can enrich and enliven the teaching of economics by adding variety and depth to the teaching process. By creating interest, by motivating discussion, and by presenting clashing and conflicting points of view forcefully and meaningfully, real-life materials make the learning experience more stimulating, informative, and enjoyable for both students and teachers.

In the second place, supplementary materials may be fresher and usually more timely than textbook materials. For example, a local bank can present the effects of a tax increase or decrease on the price level within a matter of weeks. Years may pass before information like that finds its way into textbooks.

Finally, the fact that some sponsored materials or services present a special point of view can be a blessing in disguise. Materials with a point of view can provide opportunities for learning and applying the skills of critical thinking, which helps meet one of the basic goals of economic education. You should, of course, attempt to balance points of view.

All in all, your biggest problem will not be finding materials to use in your economics class—it will be choosing the right ones and devising ways to use them best.

IV EVALUATING STUDENTS IN HIGH SCHOOL ECONOMICS COURSES

A systematic evaluation program will help you improve your students' achievement by (a) informing them about their progress as the course proceeds and (b) acquiring information that will enable you to make adjustments in your curriculum and teaching strategies. Moreover, when called upon to be accountable for student learning in your economics course, you will be able to back up your conclusions with data.

Formative Evaluation

Formative evaluation refers to measuring student learning as it occurs. When you use formative evaluation, you can modify your instruction in order to improve your students' achievement.

You can use most of the handouts in *Teaching Strategies for High School Economics Courses* for formative evaluation. Most of them require students to answer questions, make judgments, or take actions. Although some activities have been designated as evaluation activities, you are not limited to these. You may decide to use the others for discussion, for evaluation, or for both. These handouts will allow both you and the students themselves to monitor their progress.

Summative Evaluation

The purpose of summative evaluation is to give teachers information that enables them to make a general assessment of how well students have learned. Teachers use summative evaluation to evaluate their students' progress, determine grades, and gather research on the effectiveness of the curriculum. It can be used at the end of a unit, semester, or course. A good summative evaluation instrument measures not only how much was learned but what kinds of learning took place. Learning can be classified by content category and by cognitive level. For example, you may want to teach the content of supply and demand at the cognitive levels of knowledge, comprehension, application, and analysis. According to Bloom's taxonomy of educational objectives,[2] there are six cognitive levels, beginning with knowledge and rising to evaluation.

The Test of Economic Literacy

The *Test of Economic Literacy* (TEL), which is available from the Joint Council on Economic Education, is a nationally normed high school test. It covers the concepts in the 1977 edition of *A Framework for Teaching the Basic Concepts*. The questions also cover a range of levels in Bloom's taxonomy. By administering the TEL, you can get a good picture of several aspects of cognitive performance.

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2 Benjamin Bloom, J. Thomas Hastings, and George Madaus, *Handbook on Formative and Summative Evaluation of Student Learning* (New York: McGraw-Hill, 1971).

1 You will be able to see how well students did on the test as a whole. You can compare any individual student's performance to that of other students in the class. You can also compare the performance of a student or a class with the national norm.

2 You can use the test to diagnose learning problems related to a particular content area.

3 You will be able to determine a student's level of cognitive achievement within content categories. For example, a student may be mastering a concept at the knowledge level, but not at the application level.

Teacher-made Tests

Unless the content specifications of a standardized test such as the TEL are identical to the learning objectives of your class, the test may not serve you well in your evaluation. If you determine that a nationally normed instrument is not suitable for your class, your alternative is to prepare your own test.

If you decide to prepare your own test to measure cognitive outcomes, the design features of the TEL will give you a good guide as to how you should proceed.

1. You should carefully list the various content categories you will be teaching. If you have good learning objectives already prepared, this should be an easy task.

2. For each content category, specify the cognitive levels you expect the students to attain.

3. Estimate the relative weight (time, importance) you place on the cognitive and content categories. For example, if you devote twice as much time to "opportunity cost" as to "price determination," then approximately twice the number of test items should be on "opportunity cost" compared to "price determination."

4. Develop a matrix of test specifications. Figure 3 is an example of a worksheet for developing such a matrix to evaluate student progress in a one-semester economics course. The concept categories, from the 1984 edition of the *Framework*, are listed in the left-most column of the worksheet. The cognitive levels, from Bloom's taxonomy, appear at the top of the remaining columns. Using a convenient ranking system (say, a scale of 1 to 5), determine the relative emphasis you want to place on the different levels of cognitive skill you expect students to achieve in each content category. This determination will give you a good estimate of the total number of questions you need in each row and in each column. You can use a similar worksheet to design tests for each unit of an economics course. However, for unit tests, you would not want to limit yourself to the *Framework* concepts. For example, for a unit test on supply and demand, rather than using the broad *Framework* concept of "supply and demand," use narrower concepts such as changes in quantity demanded, determinants of demand, elasticity of demand, equilibrium, surpluses, and shortages.

5. Write the test items according to your worksheet specifications. There are two principal sources of objective questions. You can get them from departmental files, student workbooks, and manuals, or you can write them yourself. The first set of sources is preferable since item writing takes time. The drawback to getting questions from published sources is that you are unlikely to find many questions that test the higher cognitive levels. Authors of workbooks and manuals must write hundreds of questions in a very short period of time with the predictable result that most of the questions turn out to be of the recall and comprehension variety. After you have selected and/or written your questions, enter each question number in the appropriate cell (i.e., row and column) of the worksheet.

6. Decide how you want to administer the test. You can do a pre- and post-test sequence or just a post-test. In general, if instruction time is long, such as an entire course or semester, the pre- and post- sequence offers a number of advantages. The pretest enables you to diagnose the stock of economic knowledge with which your students entered the course; the post-test enables you to judge how much their knowledge increased by the end of the course. Of course, a post-test alone can yield important and helpful information about the content and cognitive levels of the students' newly acquired stock of knowledge. However, if you use data from a post-test only, you will have to guess the content categories in which knowledge improved and which instructional strategies caused that improvement.

Reflections

When the evaluation is completed, reflect on the experience. Was there too much evalulation or not enough? Was one aspect of the evaluation plan not carefully thought out, and did that weakness impair the results? How receptive to the data collection techniques was everyone involved? And, most important, did the evaluation suggest or bring about any moves to improve the course? A thorough and honestly done evaluation will not only help improve your teaching, but will also lead to better evaluation.

FIGURE 3 Specifications for a Final Examination in a One-Semester Course

BASIC CONCEPTS	COGNITIVE LEVEL					
	Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
FUNDAMENTAL ECONOMIC CONCEPTS						
1 Scarcity						
2 Opportunity cost and trade-offs						
3 Productivity						
4 Economic systems						
5 Economic institutions and incentives						
6 Exchange, money, and interdependence						
MICROECONOMIC CONCEPTS						
7 Markets and prices						
8 Supply and demand						
9 Competition and market structure						
10 Income distribution						
11 Market failures						
12 The role of government						
MACROECONOMIC CONCEPTS						
13 Gross national product						
14 Aggregate supply						
15 Aggregate demand						
16 Unemployment						
17 Inflation and deflation						
18 Monetary policy						
19 Fiscal policy						
INTERNATIONAL ECONOMIC CONCEPTS						
20 Absolute and comparative advantage and barriers to trade						
21 Balance of payments and exchange rates						
22 International aspects of growth and stability						

V HELP! A BRIEF BIBLIOGRAPHY AND ADDRESS BOOK

This bibliography will be updated periodically. Contact your nearest Center for Economic Education for revised editions.

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Publications of the Joint Council on Economic Education

Master Curriculum Guide in Economics

A Framework for Teaching the Basic Concepts. 1984.

Teaching Strategies

Basic Business and Consumer Education. 1979.

Consumer Economics. 1985.

Junior High School Level (Grades 7–9). 1981.

United States History. 1980.

Using Economics in Social Studies Methods Courses. 1982.

World Studies. 1980.

Economics-Political Science Series: Resource Guides

Analyzing Crime and Crime Control. 1981.

Analyzing Government Regulation. 1978.

Analyzing Growth Policies of Developing Countries. 1983.

Analyzing Health Care Policy. 1977.

Analyzing Inflation and Its Control. 1984.

Analyzing Tax Policy. 1979.

Other JCEE Materials

Audiovisual Materials for Teaching Economics, 3rd edition. 1980.

Test of Economic Literacy (Grades 11–12). 1979. (Two equivalent test forms and a separate examiner's manual)

See also materials described earlier under Films, Videos, and Filmstrips and Computer Software

Reference Works and Statistical Sources

Board of Governors of the Federal Reserve System. *Federal Reserve Bulletin*. Washington, D.C. Monthly.

Council of Economic Advisers. *Economic Report of the President*. Washington, D.C. Annual. (Appendix provides many important statistics about the economic state of the nation.)

Economics Encyclopedia. Guilford, Conn.: Dushkin Publishing, 1981. (Definitions, explanations, and discussions of major theories, important economists, institutions.)

Greenwald, Douglas, ed. *The Encyclopedia of Economics*. New York: McGraw-Hill, 1983. (More then 1,000 pages of material explaining 300 subjects in economics and economic history.)

Greenwald, Douglas, et al., eds. *The McGraw-Hill Dictionary of Modern Economics*, 3rd edition. New York: McGraw-Hill, 1983. (More than 600 pages of definitions, discussions, and terms.)

Hacker, Andrew. *United States: A Statistical Survey of the American People*. New York: Viking, 1983. (Also available in paperback from Penguin; contains nearly 400 pages of information; particularly useful for students.)

Johnson, Otto T., ed. *Information Please Almanac*. New York: Information Please Publishers. Annual. (A relatively inexpensive paperback with about 1,000 pages of information, much of which deals with economics.)

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U.S. Department of Commerce, Bureau of Economic Analysis. *Survey of Current Business*. Washington, D.C.: U.S. Government Printing Office. Monthly.

U.S. Department of Labor, Bureau of Labor Statistics. *Monthly Labor Review*. Washington, D.C.: U.S. Government Printing Office. Monthly.

Addresses of Organizations Providing Information or Help for High School Economics Teachers

Agency for Instructional Technology
Box A
Bloomington, Indiana 47401
1-800-457-4509
(Write for information on *Give & Take* and *Tax Whys.)*

Eric Clearinghouse for Social Studies/Social Science Education (Eric/Chess)
855 Broadway
Boulder, Colorado 80302
1-303-492-8434
(Write for list of free materials. Custom computer searches and duplicate printouts of computer searches of social studies materials are available.)

Federal Reserve
(Write the banks for *Instructional Materials of the Federal Reserve System*. Each Federal Reserve Bank also offers various educational services.)

Board of Governors of the Federal Reserve System
Publications Services
20th and C Streets, N.W.
Washington, D.C. 20551
1-202-452-3244

Federal Reserve Bank of Boston
Bank and Public Services Department
600 Atlantic Avenue
Boston, Massachusetts 02106
1-617-973-3459

Federal Reserve Bank of New York
Public Information Department
33 Liberty Street
New York, New York 10045
1-212-791-6134

Federal Reserve Bank of Philadelphia
Public Information Department
10 Independence Mall
Philadelphia, Pennsylvania 19106
1-215-574-6115

Federal Reserve Bank of Cleveland
Public Information Center
1455 East Sixth Street
Cleveland, Ohio 44104
1-216-579-2048

Federal Reserve Bank of Richmond
Public Services Department
701 East Byrd Street
Richmond, Virginia 23219
1-804-643-1250

Federal Reserve Bank of Atlanta
Research Department, Publications Unit
104 Marietta Street, N.W.
Atlanta, Georgia 30303
1-404-586-8788

Federal Reserve Bank of Chicago
Public Information Center
230 South LaSalle Street
Chicago, Illinois 60690
1-312-322-5112

Federal Reserve Bank of St. Louis
Bank Relations and Public Information Department
411 Locust Street
St. Louis, Missouri 63102
1-314-444-8320

Federal Reserve Bank of Minneapolis
Public Information Department
250 Marquette Avenue
Minneapolis, Minnesota 55480
1-612-340-2446

Federal Reserve Bank of Kansas City
Public Affairs Department
925 Grand Avenue
Kansas City, Missouri 64198
1-816-881-2402

Federal Reserve Bank of Dallas
Department of Communications, Financial, and Community Affairs
400 South Akard Street
Dallas, Texas 75222
1-214-651-6222

Federal Reserve Bank of San Francisco
Public Information Department
101 Market Street
San Francisco, California 94105
1-415-974-2246

Joint Council on Economic Education
2 Park Avenue
New York, New York 10016
1-212-685-5499
(Ask for *Checklist* of publications.)

U.S. Department of Labor, Bureau of Labor Statistics, Regional Offices

(Ask to be put on mailing list for the Consumer Price Index of the U.S. Bureau of Labor Statistics. Other information, publications, and services are also available.)

John F. Kennedy Federal Building, Room 1603
Government Center
Boston, Massachusetts 02203
1-617-223-6727

1515 Broadway
New York, New York 10036
1-212-944-3121

P.O. Box 1339
Philadelphia, Pennsylvania 19101
1-215-596-1155

1371 Peachtree Street, N.E.
Atlanta, Georgia 30367
1-404-881-4416

230 South Dearborn, 9th Floor
Chicago, Illinois 60604
1-312-353-1880

555 Griffin Square Building
Dallas, Texas 75202
1-214-767-6970

911 Walnut Street
Kansas City, Missouri 64106
1-816-374-2378

450 Golden Gate Avenue
Box 36017
San Francisco, California 94102
1-415-556-4678

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710 North Capitol Street, N.W.
Washington, D.C. 20402

(Write for information on print materials produced for sale by various government agencies. Many university and public libraries have the Publications Reference File, a microfiche catalog of government publications available for sale. There are U.S. Government Printing Office bookstores in major cities.)

INTRODUCTION TO THE LESSONS

The instructional activities that follow will add breadth and depth to your high school economics course. They provide classroom-tested lessons and materials for use by professionally trained teachers.

Throughout this guide, we stress the importance of covering the concepts described in the *Master Curriculum Guide in Economics: A Framework for Teaching the Basic Concepts*. Figure 4 is a matrix that matches the basic economic concepts in the *Framework* with the instructional activities in this volume. Use the matrix to find lessons on the concepts you wish to teach. Because of limitations of space, the matrix includes only the major *Framework* concepts. Each lesson, however, also lists the measurement concepts and broad social goals mentioned in the *Framework*.

Here is a short guide to using the lessons. Each lesson begins with an estimate of the time required. That estimate is based on following the recommended procedures and completing all activities during class time. Next, comes a list of the concepts presented, the instructional objectives of the lesson as well as its rationale, and a list of materials needed, if any. The "procedure" provides a step-by-step plan for teaching the lesson. Although the steps have been developed through use in the classroom, you will want to adapt them to suit your own objectives, students, and teaching style. For example, you may wish to skip some handouts and use others as homework. You may prefer to convert a handout that is recommended as a discussion tool into a quiz.

FIGURE 4 Matrix of Lessons in This Volume and *Framework* Concepts

FRAMEWORK CONCEPTS	LESSONS																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
FUNDAMENTAL ECONOMIC CONCEPTS																						
1 Scarcity	•		•	•																		
2 Opportunity Cost and Trade-offs	•												•									
3 Productivity				•																	•	
4 Economic Systems		•																				
5 Economic Institutions and Incentives		•						•										•				
6 Exchange, Money, and Interdependence			•						•								•	•			•	•
MICROECONOMIC CONCEPTS																						
7 Markets and Prices			•		•	•	•	•	•		•											•
8 Supply and Demand					•	•	•	•	•	•	•											•
9 Competition and Market Structure					•							•										
10 Income Distribution																•						
11 Market Failures								•			•	•										
12 The Role of Government	•											•							•			
MACROECONOMIC CONCEPTS																						
13 Gross National Product														•	•							
14 Aggregate Supply																						
15 Aggregate Demand																	•		•			
16 Unemployment														•	•				•			
17 Inflation and Deflation														•	•	•	•		•	•		
18 Monetary Policy																•	•	•		•		
19 Fiscal Policy																			•	•		
INTERNATIONAL ECONOMIC CONCEPTS																						
20 Absolute and Comparative Advantage and Barriers to Trade																					•	
21 Balance of Payments and Exchange Rates																						•
22 International Aspects of Growth and Stability																						

Lesson 1

Scarcity, Choices, and Decisions

TIME REQUIRED 1–2 class periods

CONCEPTS
Scarcity
Opportunity cost and trade-offs
Role of government
Tables

INSTRUCTIONAL OBJECTIVES Students will

- Read and interpret a table that lists government expenditures;
- State the opportunity cost of choices;
- Analyze trade-offs involved in making government spending decisions;
- Make decisions about government spending and taxes.

RATIONALE Students must understand that scarce resources make it impossible for us to have everything we want. All economic choices involve forgoing an opportunity (opportunity cost). They may also involve making trade-offs among desirable goals. In this lesson, students make decisions in the process of which they learn about and apply the consequences of making choices.

MATERIALS A copy of Handout 1-1 for each student, and a copy of Handout 1-2 for each group.

PROCEDURE

1 Give a copy of Handout 1-1 to each student. Have the students read the first three paragraphs of the memorandum. Check to be sure they understand that they must cut spending by $300,000 or increase taxes. Tell them that you will distribute Handout 1-2 in a few minutes and that they will make the decisions in small groups. Have the students read the remainder of Handout 1-1. Go over the expenditures to make sure the students understand how much each project would cost and why.

2 Form small groups of four or five students each. Have each group select a leader.

3 Distribute copies of Handout 1-2 to each group. Ask each group leader to fill in the committee members' names in the appropriate space.

4 Read aloud the first two paragraphs of Handout 1-2. You might want to point out that opportunity cost is not the sum of all the forgone opportunities but only the best of the alternative forgone opportunities. Ask the groups to complete questions 2,3, and 4 by giving three more examples of opportunity cost; question 1 has been completed as an example. Ask the group leaders to present some examples to the class. Possible examples are:

- All street lighting vs. day care center.
- Firefighter at station #2 vs. development of both parks.
- Old West storm sewer vs. day care center.
- Old West storm sewer vs. Old North storm sewer.
- Firefighter at station #1 vs. firefighter at station #2.

5 Read aloud the next paragraph of Handout 1-2 to the class. In the space provided, have each group list several goals it will be considering. Tell students they may add goals as they think of them. Ask the group leaders to present some examples of goals to the class. Goals might include equity or fairness, better quality of life, less property damage. The students should come up with others.

6 Have the students finish reading the handout. Let the groups discuss, deliberate, and write their recommendations on Handout 1-2.

7 Ask the leaders to write their groups' recommendations on the chalkboard. Allow time for leaders to explain their groups' decisions.

8 Discuss the decisions. Important points to consider are:

- How similar are the groups' decisions?
- What opportunity costs were evident in the decisions?
- How do the goals of the various groups differ?
- Why are there differences in the decisions?

9 Ask the class to provide examples of similar decisions currently being debated at local, state, and national levels. Discuss some of the opportunity costs, goals, and trade-offs involved in those decisions.

EVALUATION Assess the quality of the contributions of each student to the class discussions. Go from group to group, and assess the quality of each student's contribution to the group's deliberations.

Handout 1-1

COMMITTEE MEMORANDUM

TO: Committee Members
FROM: May R. Town, Mayor
SUBJECT: Recommendation: Taxing/Spending

I asked you to join this committee to help me solve a problem. The city's budget director has forecast that city tax revenues will be $300,000 less than expected this year, the second year of the city's two-year budget period. That means we might have to cancel several projects or raise taxes. To complicate matters, I promised in the last election campaign to complete all of the scheduled spending projects without increasing taxes. My opponent, who lost by only a few votes, argued that city spending should be cut and taxes reduced.

In making your recommendation, please use the information included here. Note that the total cost of the projects is $600,000, but only $300,000 is available without an unpopular tax increase. No additional funds can be obtained by cutting existing programs in the city's budget.

Within these limits, make whatever choice you think is best: Eliminate all the proposed projects and cut taxes; complete all the projects and raise taxes; or work out some combination either of project cuts and tax cuts or project cuts and tax increases. You can decide to cut one part of a project and keep another part. For example, you can suggest hiring only one firefighter. Be specific about which projects, if any, will be cut and by how much taxes will be raised or lowered. Record your decisions on Handout 1-2.

PROJECT EXPENDITURE TABLE: SUMMARY DATA

PROJECT	BUDGET LINE	COST	TOTAL PROJECT COST
Firefighters			$ 90,000
Station #1	A 147a	$30,000	
Station #2	A 147b	30,000	
Station #3	A 147c	30,000	
Day Care Center	B 910a	60,000	60,000
Street Lights			60,000
Bramblewood	C 113e	15,000	
Carlisle	C 113f	15,000	
Cleveland	C 113g	15,000	
Paxton	C 113h	15,000	
Bridge Repair			240,000
3rd St. Railroad Overpass	C 119c	120,000	
River Road River Bridge	C 119d	120,000	
Sewer Repair			120,000
Old West Side Storm Sewer	C 133a	60,000	
Old North Side Storm Sewer	C 133b	60,000	
Parks			30,000
Douglas Park	D 004c	15,000	
Sbrochi Park	D 004d	15,000	

Continued

From *Master Curriculum Guide in Economics: Teaching Strategies for High School Economics Courses*. 1985. Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016.

Handout 1-1 (concluded)

PROJECT DESCRIPTIONS

A 147a Firefighter at Station #1
A 147b Firefighter at Station #2
A 147c Firefighter at Station #3

Because of last year's opening of the new Station #3 (which was badly needed), each of the city's three fire stations is short one firefighter. The problem is playing havoc with the fire chief's personnel scheduling. At present, some firefighters are pulling back-to-back shifts on a rotating basis, a possibly dangerous situation for which the city must pay time-and-a-half overtime. Each added firefighter would cost $30,000 in salary, benefits, and equipment.

B 91Ca Day Care Center

A city-funded day care center for low-income families has been proposed in order to allow single parents who are poor to get off welfare and find jobs or to go back to school to get vocational training. Center advocates say that getting people off welfare will save taxpayers money in the long run. The center would be available only to single-parent, low-income families. Staffing and equipment will cost $60,000. Space is already available in one of the city's elementary schools.

C 113e Bramblewood Street Lights
C 113f Carlisle Street Lights
C 113g Cleveland Street Lights
C 113h Paxton Street Lights

Four streets (Bramblewood on the north side, Carlisle in the east, Cleveland near downtown, and Paxton on the south side) are without street lights. The residents and the police are concerned about crime, especially on Cleveland and Paxton (high crime areas). Also, many youngsters play outdoors in the evenings on Bramblewood and Carlisle, which are residential areas. One little girl was badly injured when hit by a car on Carlisle last September. Each street light project will cost $15,000. Lights were installed on four other streets during the first year of the budget.

C 119c 3rd St. Railroad Overpass
C 119d River Road River Bridge

The city engineer has found that eight bridges are overdue for repair. The worst two were fixed in the first year of the budget, with two more scheduled for repair in each year of the next three years. Failure to follow this schedule might mean that all six will have to be closed for a year or longer. Load limits on the Third Street and River Road bridges have already been reduced, forcing the fire department to detour to other streets, which delays their response time on some calls. Each bridge repair will cost $120,000.

C 133a Old West Side Storm Sewer
C 133b Old North Side Storm Sewer

New housing developments on the northwest side have put additional strain on the old storm sewers, especially in the adjacent Old West and North sides. Heavy spring and summer rains invariably cause flooded streets and basements. Some people's yards become bogs with ruined lawns and flower beds. Residents in the area are very upset. I received strong support from both areas because of my pledge to solve the problem. Sewer repair for each area is $60,000.

D 004c Douglas Park
D 004d Sbrochi Park

For some time it has been evident that the present park system is inadequate because of the many new families with young children living in this city. Douglas and Sbrochi parks have been delayed three times due to lack of funds. The city has received two federal grants of $15,000 each to develop the two parks. But the grants depend upon the city matching the grants with an equal amount of money. Thus, if funding for one park is eliminated, the $15,000 grant for that park is lost. Each park costs $30,000, of which $15,000 would come from the federal grant.

REMEMBER: Antitax sentiment in the community is running high. My opponent in the last election is already mounting a strong tax repeal drive.

Handout 1-2

ACTION MEMORANDUM

TO: Honorable May R. Town, Mayor
RE: Recommendation: Tax/Spending
FROM: Members of the Committee: _____ (Chairperson)
_____

We recognize the problem created because there are insufficient city funds for the second year of the budget. The shortage of funds has forced us to make some hard choices. Each choice involves a considerable cost. For example, raising taxes to cover all or part of the expected shortfall means that taxpayers will be forced to give up the opportunity to use the money they will pay in taxes for their own spending or saving.

If taxes are not increased, there will be other opportunity costs. For example, if we construct the two sewer projects (total cost, $120,000) we might have to give up repairing one of the bridges, or all of the parks and the additional firefighters, or both the day care center and all of the street lights. Other examples of possible opportunity cost we noticed include:

1) Bramblewood Street Lights vs. Sbrochi Park

2)

3)

4)

In making our recommendation, we considered the most important goals that our decision should achieve. For instance, we know that, given your hope of re-election, the choice must be politically acceptable. We want, also, to preserve the maximum possible economic freedom of taxpayers to use their own money as they see fit. Other goals we considered include:

1) Public safety

2)

3)

4)

We also recognize that all of the goals cannot be achieved to their fullest extent at once. Some trade-offs among goals seem to be necessary. For example, a decision to forgo two of the additional firefighters in favor of the West Side sewer repair project will mean that some public safety will be traded off to increase the West Side voters' satisfaction.

We have considererd carefully the opportunity costs and trade-offs we face because of the shortage of city revenues. Our recommendations are for the following projects to be funded:

PROJECT	BUDGET #	COST

Note to Committee: To complete this report, circle one of the words in parentheses at the end of the statement below.

Our recommendations will require that taxes be (raised, unchanged, lowered). Specify the amount of the change in taxes, if any.

From *Master Curriculum Guide in Economics: Teaching Strategies for High School Economics Courses*. 1985 Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016

Lesson 2

Different Means of Organizing an Economy

TIME REQUIRED Three class periods

CONCEPTS Economic systems (tradition, command, market)
Economic institutions
Broad social goals

INSTRUCTIONAL OBJECTIVES Students will

- Describe and give examples of tradition, command, and market systems in an economy;
- Describe and analyze the differing economic goals of different economies;
- Compare and contrast the types of institutions and their importance in different economies;
- Determine the mix of tradition, command, and market systems in different economies;
- Analyze different economies to determine whether or not the command decisions in them are made by democratically chosen leaders.

RATIONALE All societies must organize in order to deal with the basic problems raised by scarcity and opportunity cost. A society must decide what goods and services to produce, how to produce them, and how to distribute them. Societies use three approaches, which are based on tradition, command, or the market, to solve the basic problems.

In addition to trying to solve the problems of scarcity and opportunity cost, societies try to achieve broad social goals. Different societies value certain goals over others. In a democratic society, citizens must develop ideas about the merits of various goals and the trade-offs among them.

In this lesson, students will learn to recognize the relative mix of approaches used by the Soviet and American economic systems. As they analyze the methods and goals of the two, students gain practice in applying the conceptual tools used in comparing economies.

MATERIALS

- A copy of Handouts 2-1, 2-2, 2-3, 2-4, and 2-5 for each student.
- For the optional evaluation activity based on Handout 2-5, compile a bibliography of sources in your classroom, school library, and public library.

PROCEDURE

1 Give each student a copy of Handout 2-1. Have the students read it. Then discuss the differences among the approaches of tradition, command, and market economies.

2 Give each student a copy of Handout 2-2. Go over the instructions in both parts with the students. Have them read the sentences in Part 1 about the Soviet economy and mark each sentence with a *T*, *C*, or *M*. Have them complete Part 2 of the handout also. Go over the answers to Part 1; they are given after the section on evaluation. The answers to Part 2 should vary; some answers are suggested after the answers to Part 1. In reviewing the handout, discuss points such as these:

- Which economy is based mostly on the market system? (U.S.)
- Which economy is based mostly on the command system? (USSR)
- Why do we consider the U.S. economy to be a mixed market economy? (It has elements of tradition, command, and a market system.)
- What are the main differences between the use of command in the U.S. economy and the use of command in the Soviet economy? (In the U.S., democratically elected representatives make the decisions to use command, and the command part of the economy is small. In the USSR, the leaders who make the decisions are not democratically chosen, and the command part of the economy is by far the predominant one.)

3 Give each student a copy of Handout 2-3 and have them read it. Discuss the broad social goals of an economy. You might point out that different goals may predominate at different times. For example, most economies (except those of the "traditional" type) have economic growth as a goal and strive to achieve as much growth as possible. But if the pursuit of growth brings inflation with it, the attempt to curb that inflation may lead to a temporary abandonment or lesser emphasis on the goal of economic growth.

4 Give each student a copy of Handout 2-4. Go over the instructions to Part 1, and then have the students complete the rank ordering of goals for

each country. Discuss their answers, asking for their reasons and evidence to justify their ranking. You might poll the class and compile an average ranking for each goal. Then discuss similarities and differences for each country. (Answers for Part 1 of the handout are *not* provided.)

5 Go over the instructions for Part 2 of Handout 2-4 with the class. Have the students write their decisions. Then poll the class to find out their opinions on the institutions. If students disagree, ask for reasons and evidence. (Answers for Part 2 appear below.)

EVALUATION

1 Assess the quality of work done on Handout 2-5. This is a research project that requires students to apply what they have learned about the elements of tradition, command, and markets in an economy. You can assign the research project to individual students or to small groups. When they have completed their projects, you can have the students use the information they gathered to place each country on the market-command continuum and on the democratic-authoritarian continuum.

2 If you do not wish to use the research project, you can evaluate students by assessing their answers on the handouts and during class discussions.

ANSWERS FOR HANDOUT 2-2

Part 1

1 C	5 C	9 M
2 M	6 C	10 M
3 M or T	7 C	11 T
4 C	8 C	

Part 2

List three examples of tradition, command, and market elements in the United States economy.

Tradition

1 Some children go into same occupations as their parents.
2 Tips given to people who perform personal services such as drivers of taxicabs and people who wait on tables in restaurants.
3 Welders are usually men.

Command

1 Governments tax citizens.
2 Governments require children to attend school.
3 Governments set safety standards for highways, buildings, vehicles, etc.

Market

1 Supply of and demand for workers determines their wages.
2 Businesses seek profits by producing what consumers want.
3 The buying choices of consumers expressed in the market largely determine what is produced.

ANSWERS FOR HANDOUT 2-4, PART 2

1 U.S. and USSR (Answers may vary)
2 USSR
3 U.S.
4 U.S.
5 USSR
6 USSR
7 U.S.
8 USSR
9 USSR (because of shortages)
10 U.S.

Handout 2-1

TYPES OF ECONOMIC SYSTEMS

People and societies organize economic life to deal with the basic problems raised by scarcity and opportunity cost through what is called an economic system. An economic system can be described as the collection of institutions, laws, activities, controlling values, and human motivations that collectively provide a framework for economic decision-making.

In a world of scarcity and opportunity cost, all societies must decide the basic economic questions of what goods and services to produce, which ones to forgo or postpone, and when and how to transfer productive resources from one use to another. Decisions must also be made about how much effort to devote to increasing total output as well as how to divide the total output of a society among its members—that is, how to distribute the total real income an economic system generates. These decisions all hinge on how economic resources are allocated.

There are three basic approaches to economic decisions about resource allocation. One is based on **tradition,** that is, people generally repeat the decisions made at an earlier time or by an earlier generation. A second is based on **command,** that is, decisions are made largely by an authority, such as a feudal lord or a government planning agency. Authority in a command economy can be exercised in a democratic fashion or it can be imposed from above by people whose power is not subject to the outcome of free elections. The third is based on **markets.**

A market economy is a system of decentralized decision-making in which individuals and business firms, in their various capacities as consumers, producers, workers, savers, and investors, participate in the market through decisions that are reflected in the supply and demand for various goods and services. The market "adds up" these millions of decisions about supply and demand and forges out of them an interrelated network of market prices that reflect the preferences of all the participants. Market prices—and the changes in them—act as signals to producers, telling them what buyers want. Market prices also act as rationing devices by allocating productive resources and finished goods and services among members of society according to what buyers are willing and able to pay.

No real-world economy is a pure form of a traditional, a command, or a decentralized market economy. Every existing economy uses a different "mix" of allocating mechanisms to answer the basic economic questions, and each has somewhat different institutions, controlling values, and motivating forces at work which affect the operation of the economy. The element of tradition is, for example, most evident in the rural areas of the less developed countries of Asia and Africa. The element of command is most evident in the Soviet Union and other centrally planned economies. Decentralized or market decision-making is most evident in the United States, Australia, Canada, and Western Europe; but even among these countries, considerable diversity exists in the amount of government planning and in the variety of economic institutions.

Understanding how economic decisions are made in a particular economy requires careful attention to questions such as the following:

— What is the actual "mix" of allocating mechanisms? That is, how many economic decisions are tradition oriented? How many are made by central command? How many are left to decentralized market forces?

— What are the most important economic institutions of the society, and what role do they play in shaping economic decisions?

— What are the controlling values and motivating forces that condition economic behavior in the society?

— What, if any, significant changes appear to be taking place in the economic system?

Finally, it should be noted that people of all societies, regardless of the type of economic system, engage in certain basic economic activities. These include **producing, exchanging,** and **consuming** goods and services, as well as **saving** and **investing** so that capital goods and human capital can be accumulated to increase output and productivity. The distinguishing characteristics of an economic system thus are not the economic activities that are carried on but the kinds of economic institutions that exist and the way in which they influence decision-making.

SOURCE: *Master Curriculum Guide in Economics: A Framework for Teaching the Basic Concepts,* 2nd ed. (New York: Joint Council on Economic Education, 1984), pp.16–17.

From *Master Curriculum Guide in Economics: Teaching Strategies for High School Economics Courses.* 1985 Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016.

Handout 2-2

TRADITION, COMMAND, AND MARKETS IN THE SOVIET AND AMERICAN ECONOMIES

Name _____ Class _____

PART 1

Below are some statements about the economy of the Soviet Union.* Place a *T* in the space after the sentence if you think it gives an example of tradition in the Soviet economy. Place a *C* in the space if you think the sentence gives an example of command in the Soviet economy. Place an *M* in the space before the sentence if you think it gives an example of a market in the Soviet economy.

In the Soviet Union because consumer goods are produced according to a plan developed by the authorities, some items are often in short supply. *(1)*_____ Long lines form to buy "hard-to-get" or especially desirable items which are often bought by consumers not because they want the item, but to use in trade at some future time. *(2)*_____ Soviet shoppers often know the clothing and shoe sizes of many friends and relatives so that the shoppers can buy items for others should they happen to be in the store when particularly desirable goods are made available. *(3)*_____ Soviet factory managers have production goals set by the economic planners. *(4)*_____ Workers must have permission to change jobs or move to a new city, but they have little fear of becoming unemployed as long as they do their jobs and avoid "undesirable" political activity. *(5)*_____ The government also provides free medical care to its citizens, although the quality of that care varies from place to place and is generally up to Western standards only in facilities reserved by law for party officials and other important people. *(6)*_____ Almost all housing in Moscow is owned by the government and people are assigned to apartments. *(7)*_____ The living quarters are generally small, and often more than one family shares an apartment, but the government keeps rental costs very low. *(8)*_____ Sometimes a change in people's circumstances (marriage, divorce, baby) prompts them to go to one of several "walking want ads" sections of town—places where people wearing signs advertise apartments for exchange. *(9)*_____ On the other hand, if a person wants to buy a car, one can avoid the long wait (perhaps several years) by going to another section of Moscow where car owners bring their cars for sale, often at prices higher than for new cars. *(10)*_____ If a person is successful in getting an item that's hard to find or a new apartment or a car, chances are he or she will celebrate, as many in the Soviet Union do, by sharing some vodka with friends. *(11)*_____

PART 2

List three example of tradition, command, and market elements in the United States economy.

Tradition

1

2

3

Command

1

2

3

Market

1

2

3

*Statements about the Soviet economy are adapted from Hedrick Smith, *The Russians* (New York: Ballantine, 1977), especially, chapters 2 and 9.

Handout 2–3

BROAD SOCIAL GOALS OF A SOCIETY

The broad social goals that relate to economics and which are given considerable importance in American society today are economic freedom, economic efficiency, economic equity, economic security, economic stability (full employment and the absence of inflation), and economic growth. These goals, and the importance attached to each of them, guide individuals and society in the making of decisions. The goals provide targets and a sense of direction in formulating the means for reaching these targets.

These goals can also be thought of as criteria for evaluating the performance of the economic system (or parts of the system) and for examining the usefulness of new as well as existing programs. Some of the goals, such as freedom or equity, are difficult to present in quantitative form. Others, such as full employment or price stability, can be articulated as numerical targets. Indeed, in 1978 Congress for the first time established specific numerical goals for unemployment and inflation. The 1978 legislation, popularly known as the Humphrey-Hawkins Act, set the target for the unemployment rate at 4 percent, to be achieved by 1983. The rate of inflation, as measured by the consumer price index, was to be reduced to 3 percent by 1983 and to zero by 1988.

A comparison of the goals of the Humphrey-Hawkins Act with what has happened as of this writing makes it clear that economic goals are rarely if ever fully attained; if they are, it is usually for short periods of time only. Nevertheless, the results point up the conclusion that only by attempting to set clear, specific goals is it possible to measure the progress made in attaining them.

1. ECONOMIC FREEDOM

Freedom as an economic goal concerns the freedoms of the marketplace—the freedom of consumers to decide how they wish to allocate their spending among various goods and services, the freedom of workers to choose to change jobs, join unions, and go on strike, the freedom of individuals to establish new businesses and to decide what to produce and when to change the pattern of production, the freedom of savers to decide how much to save and where to invest their savings. Of particular interest is the effect of actions by individuals, groups, or governments to enhance or restrict freedom in the marketplace and thereby affect the possible attainment of the other goals of efficiency, equity, security, stability, and growth. A number of people argue that government regulation limits the freedom of some people to make their own choices. Others argue that government policies may free some people to take greater advantage of the opportunities provided in a market economy. Given the differences in viewpoint, it is essential to define the kinds of freedom under discussion and whose behavior is most likely to be affected.

2. ECONOMIC EFFICIENCY

Efficiency can have two meanings. The term can refer to technical efficiency, which focuses on using the least input of resources to obtain some stated level of output, or obtaining the highest level of output using fixed inputs of specified resources. Since technical efficiency does not take into account the different costs of various inputs or the different benefits of various outputs, considerations of technical efficiency alone cannot indicate the most appropriate decision to make. An economy might be technically efficient in producing good A, for example, but if consumers do not want good A and prefer good B instead, then it would not be economically efficient to produce good A.

Economic efficiency is a broader concept than technical efficiency. Economic efficiency goes beyond technical efficiency and takes into account the costs and benefits associated with various market preferences and decisions. In order to obtain maximum benefits from using our limited resources, we should undertake only those economic actions which result in additional benefits that exceed the additional costs. By this standard, economic actions should not be undertaken if the additional costs exceed the additional benefits. The concept of economic efficiency is central in

SOURCE: *Master Curriculum Guide in Economics: A Framework for Teaching the Basic Concepts*, 2nd edition (New York: Joint Council on Economic Education, 1984), pp. 52–55.

economics, and it should receive heavy emphasis in both individual and social decision-making.

3. ECONOMIC EQUITY

Equity, which deals with what is "fair" and what is "unfair" or what is "right" and what is "wrong," is difficult to define precisely. Economic equity can be described as the application of our concepts of what is fair and what is unfair—or of what "ought to be" and "ought not to be"—to economic policy. To be sure, people differ in their conception of what represents equity or fairness. However, in evaluating economic performance, the concept serves as a reminder to investigate which or what kinds of people are made better or worse off as a result of, for example, a change in prices or the introduction of new government program. Though two actions may appear to be equally efficient from an economic standpoint, one could benefit the old and another the young, one might benefit consumers and another producers, and so on. Many people would not be indifferent about who benefits from a policy, because they harbor some general idea of what is equitable. From the viewpoint of economics, equity ultimately deals with the distribution of income and wealth. One way of dealing with this question is simply to talk about the effects of economic actions on the distribution of income and wealth: Who gains and who loses? The distinction between equality of *opportunity* and the equality of *results* is also important when economic equity is addressed.

4. ECONOMIC SECURITY

The goal of economic security concerns the desire of people to be protected against economic risks over which they may have little or no control. Such risks include accidents on their jobs, unemployment, destitution in old age, business failures, bank failures, and precipitous price declines for one's product. Economic security is enhanced by individual efforts, such as saving and the purchase of insurance, as well as by the growth of the economy, through which the mass of people receive more material well-being. Various government programs such as worker's compensation, unemployment compensation, social security, aid to families with dependent children, federal insurance of bank deposits, and farm price supports are also aimed at increasing economic security in the United States. Nations also engage in the quest for economic security by seeking international agreements which assure them of access to key resources or of adequate prices for their exports. In the last analysis, it is the possession of real goods and access to services or assured claims to goods and services that provide economic security.

5. FULL EMPLOYMENT

Full employment prevails when all of an economy's resources are utilized to capacity, but most discussion turns on the employment or unemployment of people. In practice, an unemployment rate for people that reflects normal frictional unemployment—unemployment that occurs as workers change jobs or enter the labor force—has come to be viewed as full employment. Debate continues as to what unemployment rate—at present suggestions range from 3 to 7 percent of the labor force—constitutes full employment. But keeping the goal of full employment in view helps to remind us of the costs in lost output to the economy and in economic hardship to individuals that result from rates of unemployment that are too high.

6. PRICE STABILITY

. . . [O]verall price stability means the absence of inflation or deflation, not the absence of changes in relative prices in particular markets. In reality, overall price-level changes are not often likely to be zero. Not only do our price indexes fail to reflect some improvements in product quality that in effect lower certain prices, but more important, price changes reflect the push and pull of market forces as changes occur in supply and demand. What constitutes "reasonable" price stability is the subject of much discussion. Nonetheless, this goal recognizes that sharp price changes necessitate costly adjustments in the behavior of individuals and businesses in order to cope with the effects such changes produce.

7. ECONOMIC GROWTH

Economic growth means producing increasing amounts of goods and services over the long term. If the people of a society want to raise their level of living, they must produce more goods and services. If the population is growing, the amount produced must be still greater to provide for the additional people. This is why changes in real GNP *per capita* (that is, per person) are usually more meaningful than changes in total GNP as a measure of growth.

Economic growth is an important goal in virtually all countries, and is closely related to several of the

other goals discussed above. Both individuals and nations try to increase their economic security and well-being by expanding output. Individuals seek ways to enhance their earning ability while nations seek to stimulate the growth of per capita output and income. Economic growth helps provide jobs for a growing labor force, and economic growth also makes it easier for a society to devote some of its output to promoting greater economic equity and greater economic security by assisting the disadvantaged, the disabled, or other groups that need help. If output does not grow, one person or one group can obtain more goods and services only if another person or group receives less. But, to revert to an often-used metaphor, when a larger economic pie is baked, everyone can have a larger slice.

On the supply side, the upper limit to economic growth is determined by the availability of productive resources, the efficiency with which these resources are used, and the economic, social, and political factors that either encourage or discourage an increase in productive capacity. These latter factors include the size of the market, the value system of the people, and the degree of political stability or instability. Once the productive capacity of an economy is established, the actual rate of growth in a market economy will be determined by the level of aggregate demand. If an economy is in a recession and aggregate demand is too low to fully employ existing resources, there will be little market incentive to increase productive capacity. Thus, there is a close relationship between the short-run goal of full employment and the long-run goal of economic growth. As we have indicated, the existence of rapid inflation also hinders the long-run expansion of a nation's total productive capacity.

Handout 2-4

ECONOMIC GOALS AND INSTITUTIONS

Name _____ Class _____

PART 1

Economic systems differ because societies have different values and goals. Below is a list of some commonly accepted economic goals. Review the information on Handout 2-2 and think about any other information you have about the Soviet and American economies. Then rank-order the goals according to how much importance you think each society places on each goal. You should number the goals from 1 to 7 with 1 as the most important goal of the society.

Soviet Union		**United States**
_____	Economic efficiency	_____
_____	Economic freedom	_____
_____	Economic security	_____
_____	Economic equity	_____
_____	Full employment	_____
_____	Economic growth	_____
_____	Price stability	_____

PART 2

Different economies also have different economic institutions. Institutions may be formal organizations such as labor unions or households based on marriage. They also may be customary ways of doing things, such as using money for transactions or agreeing on wages through collective bargaining. Examine the list of economic institutions below. If you think the institution is emphasized more in the U.S. than in the USSR, write *U.S.* in the blank. If you think the institution is emphasized more in the USSR than in the U.S., write *USSR* in the blank. If you think the institution is emphasized about equally in both countries, write both sets of initials in the blank space.

1. _____ Households
2. _____ Government
3. _____ Private firms
4. _____ Labor unions
5. _____ Agricultural collectives
6. _____ Central economic planning
7. _____ Voluntary exchange
8. _____ Public ownership
9. _____ Barter
10. _____ Collective bargaining

From *Master Curriculum Guide in Economics: Teaching Strategies for High School Economics Courses*. 1985. Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016.

Handout 2-5

JUDGING A NATION'S ECONOMY: A RESEARCH PROJECT

Name _____ Class _____

Instructions: Your teacher will assign you a country. Your task will be to find out as much as you can about that country's economy. You should use at least three sources because there may be differences of opinion about the type of economy a nation has. Some sources may base their conclusions on a nation's written constitution while other sources may base their conclusions on the actual operation of the economy.

Here are some ideas about sources to use: Encyclopedias have essays on the economy of most nations in the world. Use the *Reader's Guide to Periodic Literature* to find magazine articles on the economy of your assigned country. Some other references that are updated annually are:

Political Handbook of the World. New York: McGraw-Hill.

The Europa Year Book: A World Survey. London: Europa Publications.

Statesman's Year-Book. New York: St. Martin's Press.

After you have read about your assigned country, your next job is to place its economy on the continuums described below. Then write a three-page essay telling why you placed the economy where you did. The information below more fully explains your task.

All developed economies are mixed, that is, they have both market and command elements. An essential difference between economies that tend to be more market-oriented and those that tend to be more command-oriented is in who decides the answers to the basic economic questions. Figure 1 shows that individual consumers and businesses decide the answers in market economies while government authorities are more important in command economies.

FIGURE 1

WHO DECIDES?

Consumers, businesses — *Government authorities*

Market — *Mixed* — *Command*

Another question concerns how democratic or autocratic the command portion of an economy is. Individuals might agree democratically to give government some authority to make economic decisions. They give up their power to make some decisions directly in the market and replace it with indirect control of those decisions in the political arena. This is very different from authoritarian or totalitarian command. There the individual has neither direct market control nor indirect political control of economic decisions. Figure 2 illustrates the question of "Who decides about who decides."

FIGURE 2

WHO DECIDES ABOUT WHO DECIDES?

Individual citizens — *The individual or the group in power*

Representative democracy — Authoritarian or totalitarian government

Continued

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Handout 2-5 (concluded)

To understand an economic system, you must examine both the "who decides" and the "who decides who decides" questions. *After you complete your research,* you must determine the degree to which the economy of your assigned country tends to be market- or command-oriented. You must also find out how much democratic control of the command element there is.

Here are several questions to guide your investigation:

Who Decides? Market vs. Command Economies

1 What percentage of Gross National Product does the government spend?

2 What productive resources does the government own?

3 Does the government influence or control many economic decisions through taxes or subsidies?

4 How free are citizens to engage in whatever economic activity they choose?

Who Decides About Who Decides? Democratic vs. Authoritarian or Totalitarian Governments

1 How are governmental authorities chosen?

2 Can the citizens remove or replace leaders with whom they are dissatisfied? How may they do this?

3 Can the public exercise any control over economic decision-makers?

4 Can the public exclude governmental authority from certain areas of economic decisions?

Lesson 3

The Circular Flow of Economic Activity

TIME REQUIRED Two class periods

CONCEPTS Circular flow of resources, goods, services, and money payments
Productive resources (human resources, natural resources, capital goods)
Economic incentives (wages and salaries, rent, interest, profits)
Interdependence

INSTRUCTIONAL OBJECTIVES Students will

- Analyze the economic relationships that exist between households and businesses in a market economy;
- Name the three factors of production and what the economic returns that each factor earns are called;
- Illustrate the economic relationship among households, businesses, and government by using a diagram of the circular flow of resources, goods, services, and money payments.

RATIONALE Students will gain an understanding of the economic relationships that exist between households and businesses in a market economy. They read about the relationships and also play a game entitled "Earning a Living," which involves transactions between businesses and households. Finally, they learn how government fits into the flow of economic transactions.

MATERIALS

1 A copy of Handouts 3-1 and 3-2 for each student.

2 Transparencies of Handouts 3-3 and 3-4.

3 An overhead projector.

4 Enough Household Cards for half the students and enough Business Cards for the other half. See Procedure 3 for the total number of cards you will need for your class. Run a few extra sheets, and cut all the sheets apart ahead of time.

5 An 8½" by 11" (or larger) sheet of paper on which you have written ECONO FACTORY.

6 Masking tape or straight pins with which half the students can fasten Entrepreneur badges on themselves.

7 OPTIONAL: two small prizes

PROCEDURE

1 Explain to the class that we function in the economy in a variety of ways. We make decisions as consumers when we buy products or services; we make decisions as producers when we supply the services of our labor, our savings, or our land to business firms; we make decisions as citizen-voters when our votes or other civic actions influence the economic decisions made collectively in the economy. Tell the students they will play a game called "Earning a Living" in order to better their understanding of the interrelationships between households (consumers) and business (producers) in a market economy.

2 Give a copy of Handout 3-1 to each student. Have the students read the Overview, and then answer any of their questions about the concepts involved. Have the students read the instructions for the "Earning a Living" game.

3 Divide the class in half. Students in one group will represent business firms (entrepreneurs), and students in the other group will represent households. Give each student representing a business firm $1000 in the form of ten $100 bills and an Entrepreneur badge to wear during the game. Give each student representing a household a total of 15 Household cards. It is not necessary or desirable to give a student five of each type of card. For example, you can give one student 15 Natural Resources cards and another student 10 Human

Resources and five Capital Goods cards. However, the total number distributed to each student must be 15, and approximately equal numbers of Natural Resources, Human Resources, and Capital Goods cards must be distributed in the classroom as a whole.

4 Tape the ECONO FACTORY sign at the place in the classroom where the entrepreneurs are to exchange one set of the cards reading Natural Resources, Human Resources, and Capital Goods for one ECONO. ECONOS represent goods and services. You should staff this position during the game, or ask a student to do it.

5 Summarize the instructions for the Earning a Living game with the students, and answer any remaining questions about it. You may tell the students they have a total of 20 minutes to play the game, or you may wait until about one quarter to one third of the households have sold all their cards and then announce that the game will end in five minutes. It is important for the students to know in advance when the game will end so that they can plan for the orderly sale of their remaining productive resources and products. Be sure the students representing households know they must sell their cards for money and use the money to buy ECONOS. Be sure the students representing business firms know they must pay money for the resource cards and then sell ECONOS for money.

6 Play the game. It is possible that some households may try to circumvent the business process by bringing their resource cards directly to the ECONO FACTORY. Tell them they lack an Entrepreneur badge and therefore are unable to produce ECONOS.

7 After the game is over, ask the students representing households to count the number of ECONOS they have accumulated, and ask the students representing business firms to count the number of dollars they have accumulated. Find out how many business firms went bankrupt, how many have less than $1,000 left, how many have exactly $1,000, and how many have more than $1,000. Make certain that business firms with less than $1,000 understand they incurred a loss. Find out which business firm made the most money and which household accumulated the most ECONOS. Award a small prize to each of these students and ask them to explain why they were so successful. You may also wish to ask a few households and business firms that weren't successful why they were losers.

8 Give a copy of Handout 3-2 to each student. Have the students read Parts I and II and then complete Part II, using the information they gained from Handout 3-1 and from playing the game.

9 Discuss the students' answers regarding the flow chart. You may want one student to put a completed flow chart on the chalkboard and have other students evaluate it. Then project a transparency of Handout 3-3, and explain the circular flow of resources, goods, services, and money it shows. Emphasize the interdependence of the economic system.

10 Now ask the students to read and complete Part III of Handout 3-2 and then have the class discuss the answers.

11 Project a transparency of Handout 3-4 to illustrate the role of government in the circular flow of resources, goods, services, and money payments. Have the students compare their diagrams with that shown on the transparency. Discuss any discrepancies among the diagrams. (NOTE: Handout 3-4 also includes "transfer payments." Transfer payments have grown rapidly in recent years and consist mostly of payments by government for which the recipients do not currently perform productive services, although in some cases these payments are related to productive activity that was performed in the past. The most important transfer payments in the United States today are Social Security benefits, government employee retirement benefits, unemployment compensation, and public assistance such as aid to the elderly, aid to families with dependent children, veteran's benefits, and food stamps.)

EVALUATION

1 Assess student answers on Handout 3-2.

2 Assess the quality of student participation in class discussion.

ANSWERS FOR HANDOUT 3-2

Part II

A completed flow chart should show the following filled in:

1 Money payments
2 Finished goods and services (ECONOS)
3 Productive services (human resources, natural resources, capital goods)
4 Money income payments (wages, rents, interest, profits)
5 Product market
6 Factor market

You may wish to point out that from the perspective of the business firm, line 1 is sales revenue, line 2 is its output, line 3 represents inputs—the productive services it buys, and line 4 represents payments for productive resources (expenses and profit).

Part III

From Resource Owners (Families and Individuals) to Governments

1 Productive services

2 Money payments (mainly taxes for government services)

From Business Firms to Government

1 Goods and services supplied

2 Money payments (mainly taxes for government services)

From Government to Resource Owners (Families and Individuals)

1 Government services to resource owners

2 Money income payments and transfer payments

From Government to Business Firms

1 Government services to business

2 Money payments (for purchases and transfer payments)

Household Cards

Human Resources

Natural Resources

Human Resources

Natural Resources

Human Resources

Natural Resources

Human Resources

Natural Resources

Human Resources

Natural Resources

Capital Goods

Capital Goods

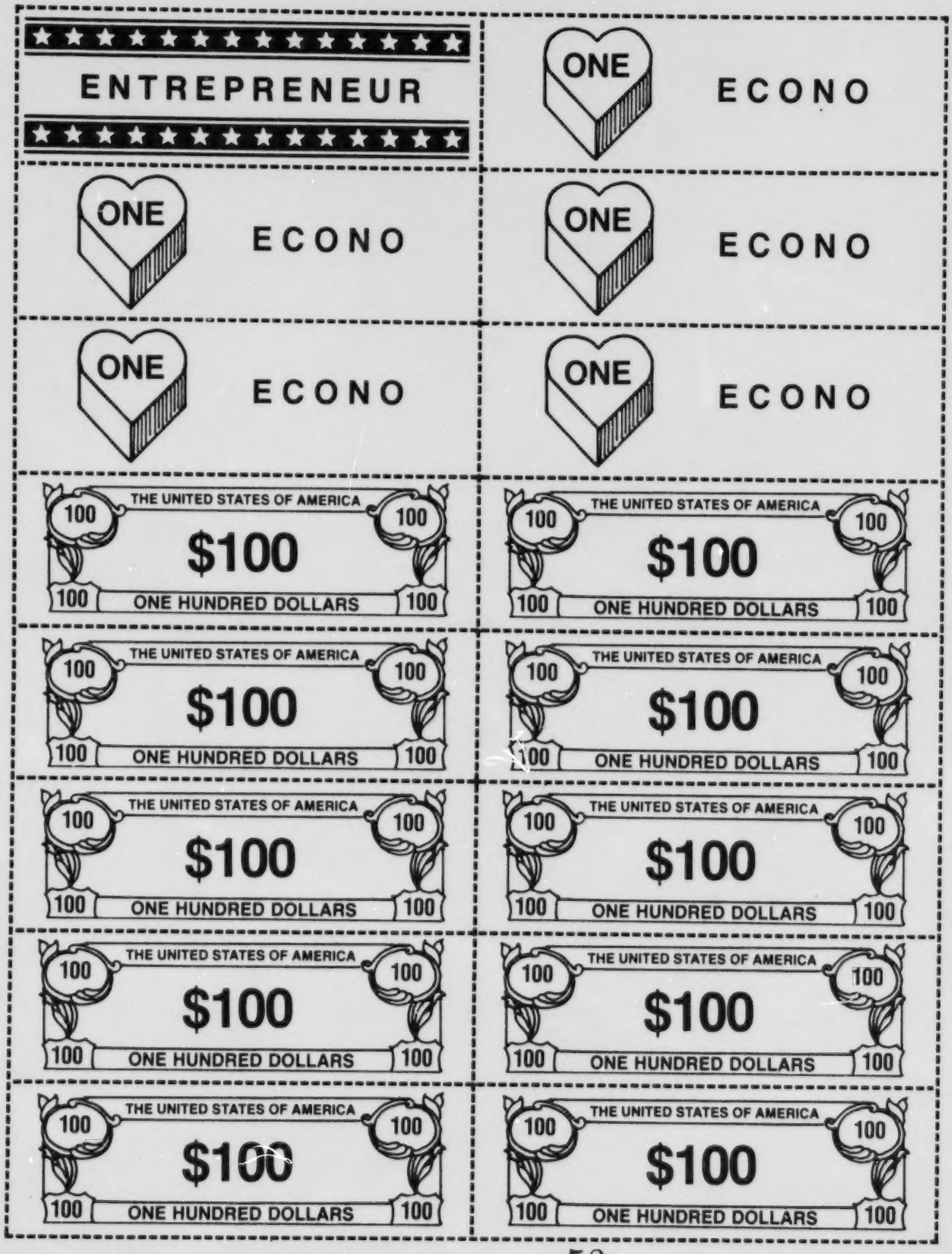
Capital Goods

Capital Goods

Capital Goods

Capital Goods

Business Cards



Handout 3-1

EARNING A LIVING

Name _____ Class _____

OVERVIEW:

Individuals function as both **consumers** and **producers.** In the U.S. economy, consumers use dollars to buy the goods and services that business firms produce. The markets in which these exchanges take place are known as **product markets.** The local grocery store is one example of a product market. Can you think of others?

Individuals also function as producers by supplying productive resources to businesses, which use these resources to produce goods and services. The markets in which these exchanges take place are known as **factor markets** (or resource markets). Examples of factor markets are the hiring of workers by a business firm, as well as the savings individuals place in a bank, plus the bonds, common stocks, etc., that are lent to or invested in a business firm. Payments for savings (including bonds) lent to others is called interest; earnings paid to the owners of common stocks are called dividends.

There are three categories of productive resources used to produce goods and services. They are human resources, natural resources, and capital goods.

Human resources are the number of people that are available for work and the ability, quality, and motivation of these individuals. The quality of human resources reflects the health of people and their past efforts to improve their skills, knowledge, and motivation through education and training. Businesses pay wages and salaries to households—actually, to the individuals in those households—for the use of labor resources. Approximately 75 percent of all income earned in the U.S. economy represents labor income.

The ability of some people to organize economic activity by taking the risks associated with starting a business or introducing a good or service into the marketplace in hopes of earning a profit is given a special name, entrepreneurship. In our economy the owners of business firms are the entrepreneurs. If a business firm is successful in selling its product for more than it costs to produce it, then the business earns a profit. If it is unsuccessful, it will incur a loss. Profits represent the return to business for risk-taking, motivation, efficiency, or some type of monopoly power—perhaps for all of the foregoing.

In order to earn profits, businesses must supply products that households want to buy. If a business firm doesn't produce what households want to buy or if it doesn't keep its costs of production down enough to compete with other producers, it will incur losses. A firm will eventually go bankrupt if its losses continue long enough.

Natural resources are the gifts of nature. They include land, timber, water, fish, oil and mineral deposits, the fertility of the soil, and climatic conditions. Some natural resources, such as timber, are renewable, and others, such as oil, are not.

Capital goods are the manufactured or constructed means with which production is carried on. They include buildings, machinery, and equipment used by business in the production process. When such items are not owned by the business that uses them, the users pays the owner a fee for the right to such use. (Incidentally, in everyday speech people commonly refer to money as capital, but in economics the terms capital or capital goods refer to the buildings, machines, etc. that produce goods or services.)

INSTRUCTIONS FOR THE EARNING A LIVING GAME:

In this game you will play the role of either a household or a business. Read carefully about the function of each in the game. Your teacher will assign you your role.

Households: Your function is to sell to business the human resources, natural resources, and capital goods it must have to produce a product.[1] You should

1 Corporations are also owners of natural resources and capital goods, but the owners of a corporation—that is, its stockholders—are families and individuals or their representatives.

From *Master Curriculum Guide in Economics: Teaching Strategies for High School Economics Courses.* 1985. Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016

use the income you earn from selling these resources to buy from business the goods and services your household requires. These goods and services are called ECONOS in this game. You can satisfy all your household needs and desires by purchasing ECONOS, which are the products produced by business in the Earning a Living Game. Your success as a household will be measured according to how many ECONOS you are able to accumulate during the game. You have been given 15 Resources cards. In order to buy ECONOS, you must sell your resources to businesses and then use the income you make to acquire ECONOS. You shouldn't sell all your resources immediately because their prices may change as the game goes on, but, in general, the more resources you sell, the more money you will earn to acquire ECONOS. Do not hoard your resources because only the value of ECONOS will count at the end of the game.

Business Firms: Your function is to supply to households the goods and services they desire and earn a profit in the process. In this game the only products households want to buy are ECONOS. In order to make one ECONO, you must act as an entrepreneur and acquire 1 unit of human resources, 1 unit of natural resources, and 1 unit of capital goods. Your firm must buy these resources from households at the best price you can negotiate. Once you have accumulated 1 unit of each, you may turn them in at the class factory, which will produce 1 ECONO for you. You are then free to sell the ECONO to any household for the best price you can negotiate. In order to earn a profit, you must sell the ECONO for more than your costs of production, which in this game include the wages and salaries paid labor and the rent and interest paid for the use of natural resources and capital goods. You can then use the money you receive from the sale to acquire additional resources in order to produce more ECONOS. You will receive $1,000 to start the game. Your business success will be measured according to how many dollars of profit you are able to earn during the game. Plan to have all your products sold by the end of the game. If you run out of money completely and have no ECONOS to sell, you must shout "bankrupt," return to your seat, and quit the game.

A Word about Pricing: Only $100 bills are used in this game. It is possible to arrive at prices other than $100, $200, $300, etc., for resources and ECONOS by combining several items in a single transaction. For instance, two Resources cards could be sold for $300, which is the equivalent of $150 each; five cards could be sold for $300, which is the equivalent of $60 each. However, you must agree on a price for which an exchange can take place using the money in the game. A suggested price range for Resources cards would be in the $50 to $300 range, although any other price that the buyer and seller can agree on is acceptable.

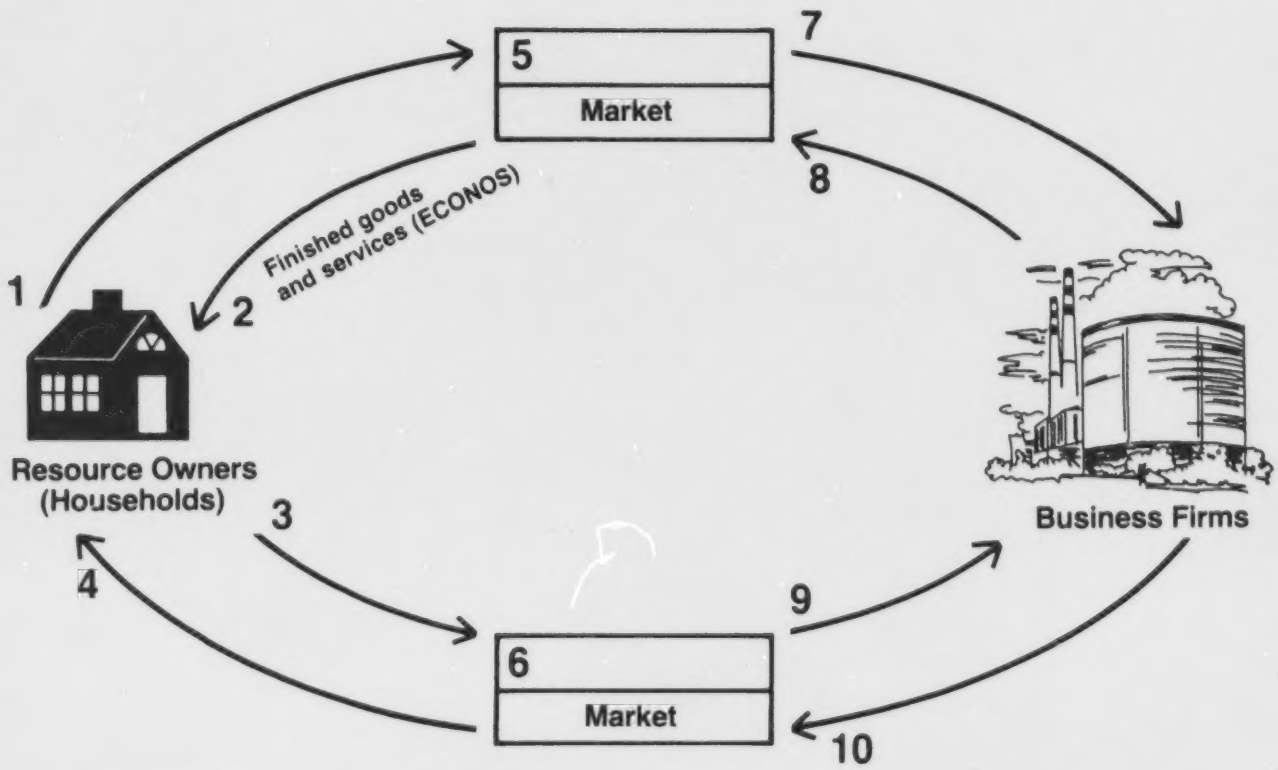
Handout 3-2

THE CIRCULAR FLOW OF ECONOMIC ACTIVITY

Name _____ Class _____

I Owners of resources (families and individuals) supply the services of their land, labor, and capital to businesses in exchange for money income payments in the form of wages, salaries, rents, interest, and profits. Owners of the resources in turn use these income payments to purchase the finished goods and services supplied by the businesses. Business firms then use the proceeds from these sales to pay the resource owners for the services the firms receive by employing the resources. This is how the circular flow of resources, goods, services, and money income payments is established and maintained.

II In the circular flow chart (diagram) below, the curved lines with arrows show the direction of payments and products that flow to and from households and businesses. The outer set of lines shows the flow of income (money payments). The inner set of lines shows the flow of products and services for which the payments are made. Label the lines to describe what the two sets of flows consist of. (One label for the flow of products and services has already been written in to help you get started.)



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Handout 3-2 (concluded)

III Now try to expand the circular flow chart to include government. Resource owners sell the services of some of their labor and other resources to governments as well as to businesses, and businesses sell some of their finished goods and services to governments as well as to individual resource owners. Moreover, governments collect money payments from both businesses and individual resource owners and also make money payments to both of these groups. In the space below list all the appropriate flows you can think of.

From Resource Owners (Families and Individuals) to Government

1 _____

2 _____

- **From Businesses to Governments**

1 _____

2 _____

- **From Government to Resource Owners**

1 _____

2 _____

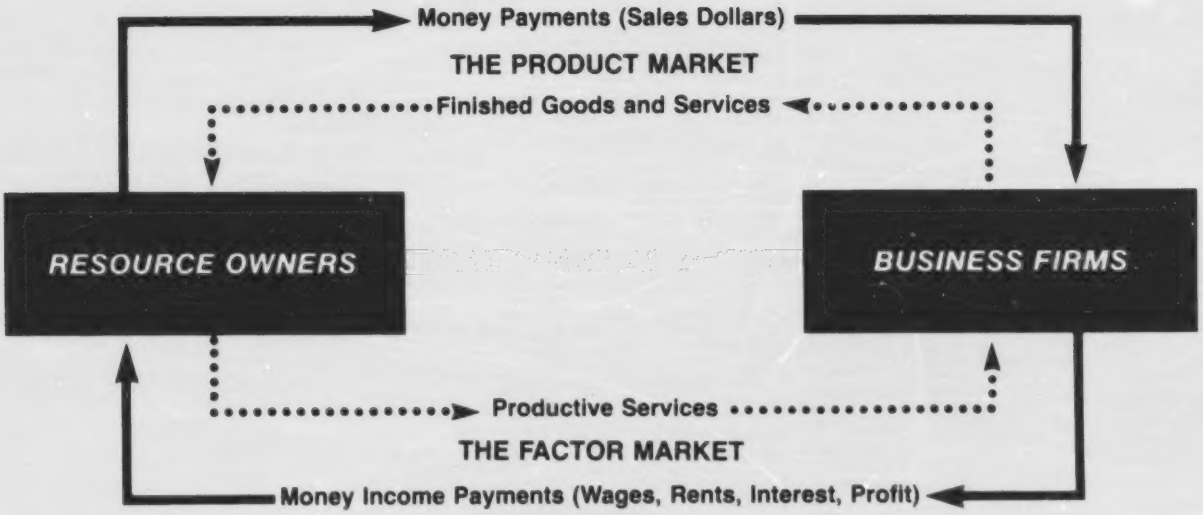
- **From Government to Business Firms**

1 _____

2 _____

Handout 3-3

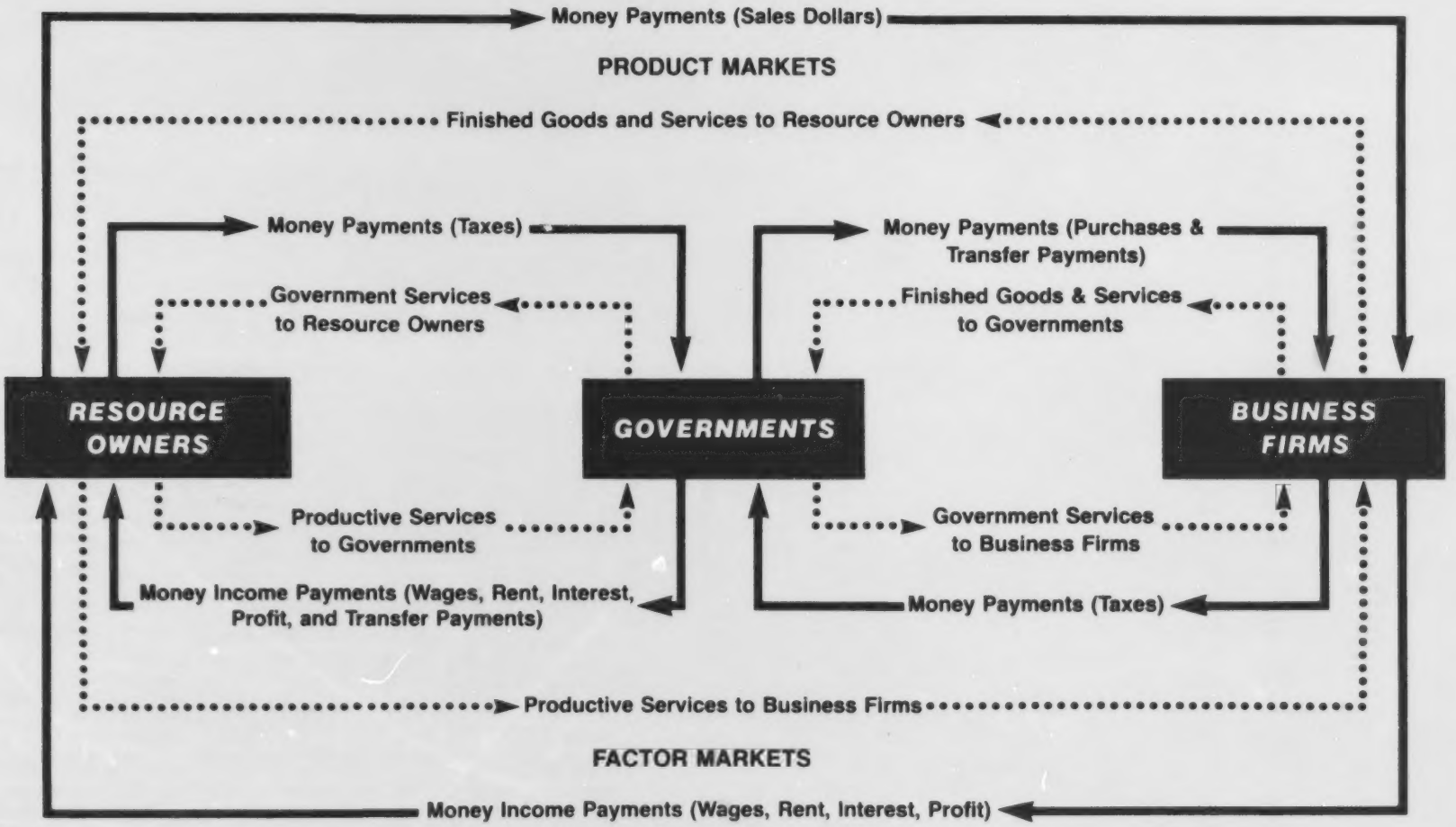
The Circular Flow of Resources, Goods, Services, and Money Payments



SOURCE: *Master Curriculum Guide in Economics: A Framework for Teaching the Basic Concepts*, 2nd edition (New York: Joint Council on Economic Education, 1984), p. 23.

Handout 3-4

Governments in the Circular Flow of Resources, Goods, Services, and Money Payments


Money Payments (Sales Dollars)
PRODUCT MARKETS
Finished Goods and Services to Resource Owners
Money Payments (Taxes)
Government Services to Resource Owners
Money Payments (Purchases & Transfer Payments)
Finished Goods & Services to Governments
RESOURCE OWNERS
GOVERNMENTS
BUSINESS FIRMS
Productive Services to Governments
Government Services to Business Firms
Money Income Payments (Wages, Rent, Interest, Profit, and Transfer Payments)
Money Payments (Taxes)
Productive Services to Business Firms
FACTOR MARKETS
Money Income Payments (Wages, Rent, Interest, Profit)

SOURCE: *Master Curriculum Guide in Economics: A Framework for Teaching the Basic Concepts*, 2nd edition (New York: Joint Council on Economic Education, 1984), p. 32.

Lesson 4

Getting More or Using Less

TIME REQUIRED Two class periods

CONCEPTS Productivity
Division of labor
Investment in capital goods

INSTRUCTIONAL OBJECTIVES Students will

- Define productivity.
- Explain how investment in capital goods and the division of labor improve productivity.
- Explain why productivity growth is important to the economy.

RATIONALE Because scarcity is the fundamental economic problem, people try to get as much output as possible from their available resources. Therefore, they try to increase productivity, which is defined as the amount of output of goods and services produced per unit of resources used (input). This simulation helps students learn how the division of labor and investment in capital goods improve productivity. Students will also examine productivity trends in the United States and analyze their economic effects. *Give & Take* program 6, "A Key to Productivity," furnishes a good introduction to this lesson.

MATERIALS

1 A large supply of 8½" by 11" scrap paper. You may also use bigger sizes.

2 A large supply of paper clips and pens.

3 A copy of Handout 4-1 for each group.

4 A copy of Handout 4-2 for each student.

PROCEDURE

1 Divide the class into book companies composed of four or five students. Each group should choose a name for its company.

2 Tell the students they are to make as many books in three minutes as they can. However, a quality control officer (you) will inspect each book before it is counted as a finished product. Only complete books that pass your inspection will count.

3 Demonstrate how to construct a book. Tear a piece of paper in half, put the halves together, and tear the two halves in half again, making four quarters. Put the four quarters together and fold them in the middle, making a 14-page book plus cover. Place a paper clip on the upper left-hand corner to hold the book together. Write the name of the company on the cover, and number the even (left-hand) interior pages from 2 through 14. That is a completed product.

4 Distribute the paper and paper clips to the groups. Let each student make a practice book. Check to be sure all students understand what they must do. Then discard all the practice books.

5 Give a copy of Handout 4-1 to each group. Tell students they must record the results of their book production. Be sure they understand all the categories for which they must record data on the handout.

6 Clear all desks except for the worksheet, paper, paper clips, and *one pen per company*.

7 **Round 1.** Inform the students that all the workers in each company must share the one pen. Each student must work *alone* to make the entire book. There can be no specialization.

8 Allow the students three minutes for the production of the books.

9 Have each company record its data on Handout 4-1. Review the results to make sure the groups have recorded their data correctly.

10 **Round 2.** Allow students to introduce division of labor—that is, have them break down the production of the book into a series of steps, and then assign each member of the group to perform

one or two of these specific steps. Give students a few moments to decide how to organize their production, but restrict each company to one pen.

11 Repeat steps 8 and 9.

12 **Round 3.** Allow each company to "buy" as many additional pens at 50 cents each as they care to. (The pens will constitute the capital goods the groups will use.)

13 Repeat steps 8 and 9.

14 **Round 4** (OPTIONAL). Allow companies to "fire" any "extra" workers. Perhaps the fifth worker's activity does not really help output much. Allow the "fired" workers to form their own companies.

15 Repeat steps 8 and 9.

16 **Round 5** (OPTIONAL). Place restrictions on the workers. Each worker might be required to take a rest break or to place a paper bag over his or her head for protection from factory air pollution. One worker could be designated as a "pollution monitor."

17 Repeat steps 8 and 9.

18 Give students the following general definition of productivity: productivity is the ratio of the amount of output of goods or services produced per unit of input. Ask the students to pick out the data categories in the entries in the Sample column of Handout 4-1 that were used in calculating the productivity ratio shown on line 10. Explain that the ratio rises as productivity improves.

19 Discuss Handout 4-1 by asking the following questions:

- What effect did the division of labor in round 2 have on productivity? (Students must interpret their data. The division of labor should have improved productivity.)
- Which did you enjoy most: making the whole book or doing only part of the job? (Answers will vary.)
- Did the division of labor lead to a more uniform product? (It should have, because each person repeats only one or two tasks.)
- What effect did investing in additional capital goods (pens) in round 3 have on productivity? (Capital investment should improve productivity.)
- What effect did firing workers in round 4 have on productivity? (If the extra workers were not needed, firing workers would have improved productivity. If they were needed, their loss should have lowered productivity.)
- What effect did increased productivity have on average cost? (It lowered average cost.)
- What new costs were incurred by attempts to increase productivity? (Buying additional capital goods—the extra pens—increased costs.)
- Why is it important to increase productivity? (It allows a society to obtain more goods and services from its scarce resources.)
- What are some steps that can be taken to increase productivity? (Set up a division of labor, use more and better capital equipment, train workers better, reduce the number of excess workers—if any.)

20 Give a copy of Handout 4-2 to each student or use the handout as a transparency. Discuss the productivity data with the class to be sure everyone understands them. Productivity in the U.S. was generally rising from the end of World War II until the latter 1970s. The rate of growth in productivity decreased beginning in the mid-1960s and actually fell in 1974, 1979, 1980, and 1981. After the discussion, have students answer the questions at the bottom of the handout.

21 Discuss the answers to the questions on Handout 4-2.

EVALUATION Assess the quality of student answers to discussion questions

ANSWERS FOR HANDOUT 4-2

1 What has been the trend of productivity in the United States since 1948? What were some of the causes of that trend? (Productivity has generally been increasing, but at a decreasing rate after the mid-1960s. It about doubled from 1948 to 1984. One important reason for the doubling was that the production of goods and services became increasingly mechanized and the machinery and production techniques used were continually improved. A second important reason was that the level of education and the level of skill of the labor force continually rose.)

2 What was the trend in productivity between 1977 to 1982? (The trend was virtually flat from 1977 to 1982.)

3 **What were some of the effects of the trend between 1977 and 1982?** (Because the trend of productivity from 1977 to 1982 was flat, the inflation experienced during those years was greater than it would otherwise have been and the level of living in the U.S. rose comparatively slowly. This productivity trend also decreased the competitiveness of U.S.-made goods in foreign markets, i.e. the competiveness of U.S. exports.)

4 **What happened to productivity in 1983–84?** (The economy had previously been in a recession and it began recovering from that recession in December of 1982. In a recession, productivity generally rises at less than its long-term trend, or declines. Productivity usually increases when the economy emerges from a recession, as was the case in early 1983, because businesses tend to have idle machinery and extra workers at such times and can therefore produce more without adding machinery and labor. Some people believe that policies of the Reagan administration helped increase productivity in 1983–84. These people claimed that tax policies fostered by that administration spurred capital investment and that the administration reduced hindrances to production from government regulations.)

Handout 4-1

WORKSHEET FOR CALCULATING PRODUCTIVITY

Name _____ Class _____

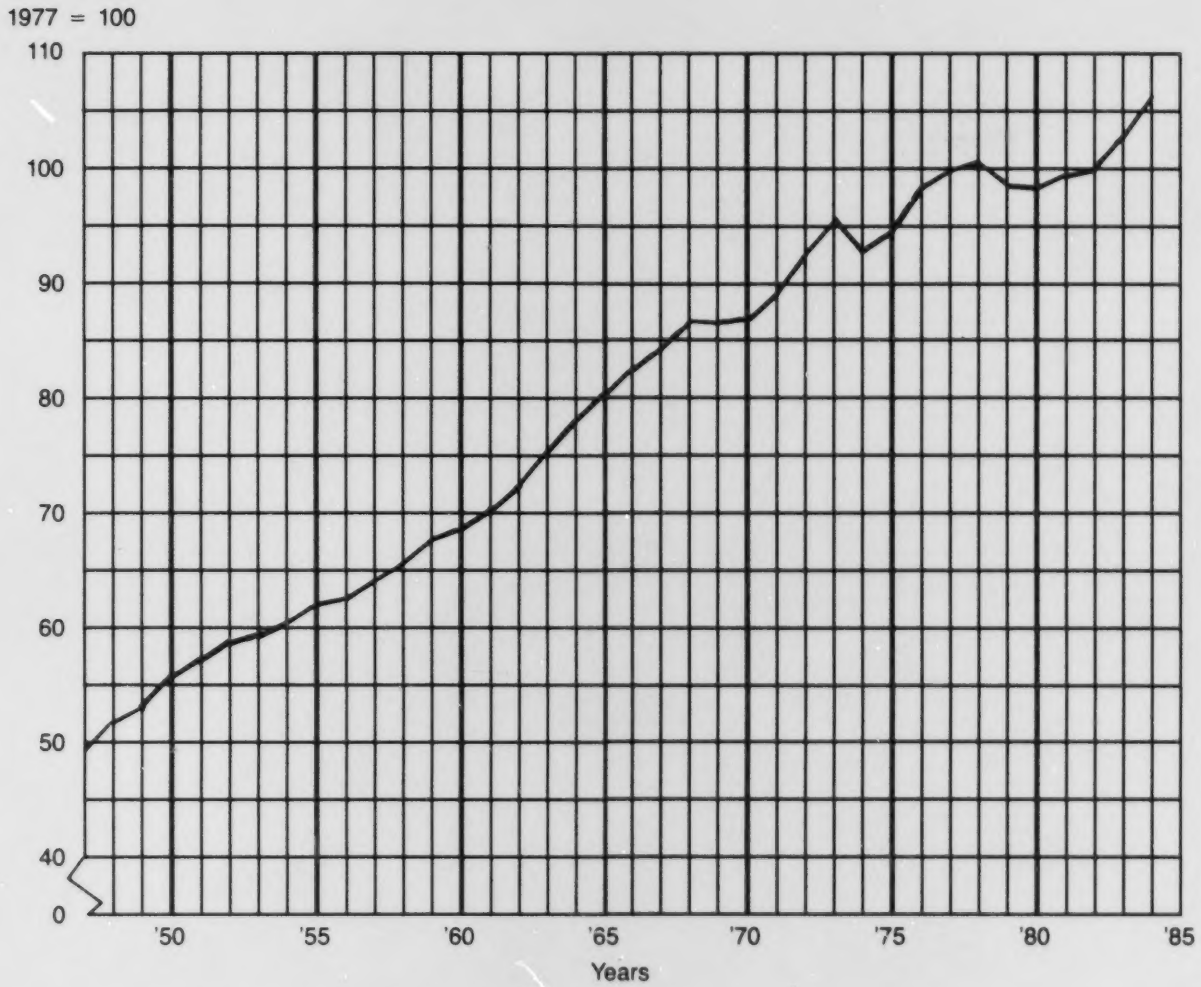
	Sample	Round 1	Round 2	Round 3	Round 4	Round 5
1 No. of books produced	**4**					
2 Cost of materials (25¢ per book)	**$1.00**					
3 No. of workers	**4**					
4 Wages ($1.00 per worker)	**$4.00**					
5 $2.00 rent for factory (desks)	**$2.00**					
6 Investment in capital goods (50¢ per pen)	**$0.50**					
7 Total costs	**$7.50**					
8 Cost per book (average cost)	**$1.88**					
9 Total time worked (3 minutes multiplied by no. of workers)	**12 min.**					
10 Output per minute worked (no. of books divided by total no. of minutes worked)	**4 ÷ 12 = 0.333**					

From *Master Curriculum Guide in Economics: Teaching Strategies for High School Economics Courses*. 1985. Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016.

Handout 4-2

OUTPUT PER HOUR OF LABOR INPUT

(total private business sector)



SOURCE: *Economic Report of the President, February 1985* (Washington, D.C.: U.S. Government Printing Office, 1985).

1 What has been the trend of productivity in the United States since 1948? What were some of the causes of that trend?

2 What was the trend between 1977 and 1982?

3 What were some of the effects of the trend between 1977 and 1982?

4 What happened to productivity in 1983–84?

From *Master Curriculum Guide in Economics: Teaching Strategies for High School Economics Courses*, 1985. Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016.

Lesson 5

A Market in Wheat

TIME REQUIRED Two or three class periods

CONCEPTS Supply and demand
Markets and prices
Competition and market structure
Charts and graphs

INSTRUCTIONAL OBJECTIVES Students will

- Describe the behavior of buyers and sellers in a competitive marketplace;
- Explain how market prices are determined;
- State what a demand schedule shows;
- State what a supply schedule shows;
- Explain the terms supply and demand.

RATIONALE The game in this lesson is designed to show students how a competitive market works. Although most product and service markets are not so competitive as the wheat market in this activity, by playing "A Market in Wheat" students can gain a better understanding of how prices are determined in any market subject to the forces of supply and demand.

MATERIALS

1 Thirty-two buy cards (Figure 5-1) and 32 sell cards (Figure 5-2). Make cards according to the following distribution:

BUY CARDS		SELL CARDS	
Buy Price	**No.**	**Sell Price**	**No.**
$3.50	2	$3.50	4
3.70	2	3.70	6
3.90	2	3.90	6
4.10	2	4.10	4
4.30	4	4.30	4
4.50	4	4.50	2
4.70	4	4.70	2
4.90	4	4.90	2
5.10	4	5.10	2
5.30	4		

2 A transparency of Figure 5-3.

3 A copy of Handouts 5-1, 5-2, 5-3, 5-4, and 5-5 for each student.

4 A set of sellers' armbands, to be used as described in Handout 5-1. Prepare these ahead of time.

NOTE: This activity requires a class of at least 25 students to be effective. Up to 50 students can participate if your room is large enough.

PROCEDURE

1 Read Handout 5-1 with students. (NOTE: You may wish to designate a student to handle the distribution and receipt of the buy and sell cards during the game and another to record each transaction on the tally sheet. Buy and sell cards should be kept separately and shuffled between rounds.)

2 Clear center of room and designate it as the marketplace.

3 Divide class into two equal groups. One group will be the sellers, the other the buyers. Explain that buyers will be buyers throughout the game, and sellers will be sellers throughout the game. Give sellers their armbands.

4 Hand out individual score sheets (Handout 5-2) on which participants can record their transactions. Review details of the score sheet if necessary.

5 Make sure students understand how to calculate "profit" on their score sheets.

6 Explain that you will conduct five rounds of trading sessions of five minutes each. After the first round, tell students it was for practice but that the next four rounds will count. Announce to the students when one minute remains in each round.

7 After each trading round, allow students time to figure their net losses and gains—their "profit." Before discussion (Procedure 10) have stu-

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This version of The Wheat Game combines procedures used in "The Wheat Market Game," *Teacher's Manual for Economics Readings for Students in Ninth Grade Social Science*, by Mindella Schults (Developmental Economic Education Program [DEEP] of the Pittsburgh Public Schools, 1967), pp. 44-53, and "The Big Apple Game," *In The Market Place: A Basic Unit on the American Economic System* (Olympia, Wash.: Office of the Superintendent of Public Instruction, 1976; used by permission).

dents calculate their *total* profit or loss in rounds 2 through 5.

8 Encourage students to make as many deals as they can in the time permitted. Explain that it is permissible to take a loss in order to get a new transaction card. Try not to give away the fact that the students who will have the highest profits are usually those who engage in the most transactions. This fact will be "discovered" during the discussion following completion of the game (Procedure 10).

9 During nontrading time between rounds 1 and 2, direct students' attention to the market record on the tally sheet. Say that it contains useful information for them. Do not elaborate.

10 Conduct postgame discussion:

a What was the price the wheat was most frequently sold at in each round? (Have students examine data on their score sheets and on the class tally sheet.)

b In which round was there the greatest spread in price? (Examine data.)

c Why did the prices become more clustered? (Greater competition is the most important cause for the clustering of prices. This phenomenon represents the tendency of a competitive market to move toward an equilibrium price as information increases.)

d Who determined the "market price" for wheat, buyers or sellers? (Both buyers and sellers did by their interaction in the marketplace.)

e How did supply and demand (Sellers tried to get higher prices; buyers tried to get lower prices. Because there was competition among members of each group, no one could exercise control over the price.)

f Why were some students able to make more total profits than others? (Probable answer: They were able to conclude many transactions, each of which yielded a small profit.)

11 The buy and sell cards may also be used for an exercise in graphing. The information on the cards can be converted into supply and demand schedules and employed to construct a graph. The graph will consist of a line for market supply and a line for market demand. The point at which the lines intersect represents the market price for these schedules of supply and demand.

Give the students Handouts 5-3 (blank graph) and 5-4 (the summarized data). Tell the students to construct the graph by placing dots at the points that correspond to all the combinations of prices and quantities given in the supply schedule on Handout 5-4. They should then do the same, but using crosses instead of dots, for the demand schedule. Connecting the supply dots produces the supply schedule; connecting the demand crosses produces the demand schedule. Remind the students to label each curve. When they have finished, project the accompanying completed graph or give each student a copy of it.

The graph indicates that, if given enough time, a perfectly competitive market would reach an equilibrium price of $4.30 per bushel and that 240 bushels of wheat would be sold at that price. Obviously, a price of about $4.30 will not prevail until students have played a few rounds or until they get the full hang of the game. But as the students' experience accumulates, their transactions should start to move toward the equilibrium price.

12 After students complete the graphing exercise, ask:

a What does the demand schedule show? (The quantities of wheat demanded at various prices. Explain to students that this schedule is what economists mean by the shorthand term "demand.")

b What does the supply schedule show? (The quantities of wheat supplied at various prices. Explain to students that this is what economists mean by the shorthand term "supply.")

c What relationship exists between the price of a good or service and the quantity people are willing to buy? (When prices rise the quantity demanded decreases, and vice versa—assuming other conditions remain unchanged.)

d What relationship exists between the price of a good or service and the quantity people are willing to supply or produce? (When prices rise, the quantity supplied increases, and vice versa—assuming other conditions remain unchanged.)

13 OPTIONAL. Use to show the effects of changes in supply and in demand on price.

a Conduct one or more additional rounds of the game but cut the number of sell cards of each denomination in half. Have students record their transaction prices and their gains or losses on their score sheets. Examine the tally sheet and ask students to explain how and why prices changed as

they did. (Prices should have increased because of restricted supply.)

b Next, conduct one or more additional rounds with the number of buy cards of each denomination cut in half. Have students record their transactions. Examine the tally sheet and ask students to explain how and why prices changed as they did. (Prices should have decreased because of reduced demand.)

EVALUATION

1 Assess the quality of student contributions to class discussions.

2 Have students take the Market Game Test (Handout 5-5).

a What does the term "supply" mean? (The amount of a good or service that would be offered for sale at various prices.)

b What does the term "demand" mean? (The amount of a good or service that buyers would be willing to purchase at various prices.)

c In your own words, explain the law of supply and demand, i.e. (1) the relationship between quantity supplied and price and (2) the relationship between quantity demanded and price. (Assuming other conditions remain unchanged, when price increases, the quantity demanded decreases, and when price decreases, the quantity demanded increases; when prices rise, the quantity supplied increases, and when prices fall, the quantity supplied decreases.)

d Use the following terms to complete the sentences below. You will not need to use all of the terms.

increase *remain unchanged* *be less*
decrease *be greater*

(1) If everything else remains the same, the amount of wheat available for sale at a price of $4.90 per bushel would probably *be greater* than the amount available for sale at a price of $3.90 per bushel.

(2) However, the demand for wheat would *be less* at $4.90 than at $3.90 per bushel.

(3) All things being equal, if less wheat were demanded then the prices charged for wheat would probably *decrease*.

(4) If the amount of wheat for sale doubled and the amount of wheat people were willing to buy doubled, the price would probably *remain unchanged*.

WHEAT SUPPLY AND DEMAND

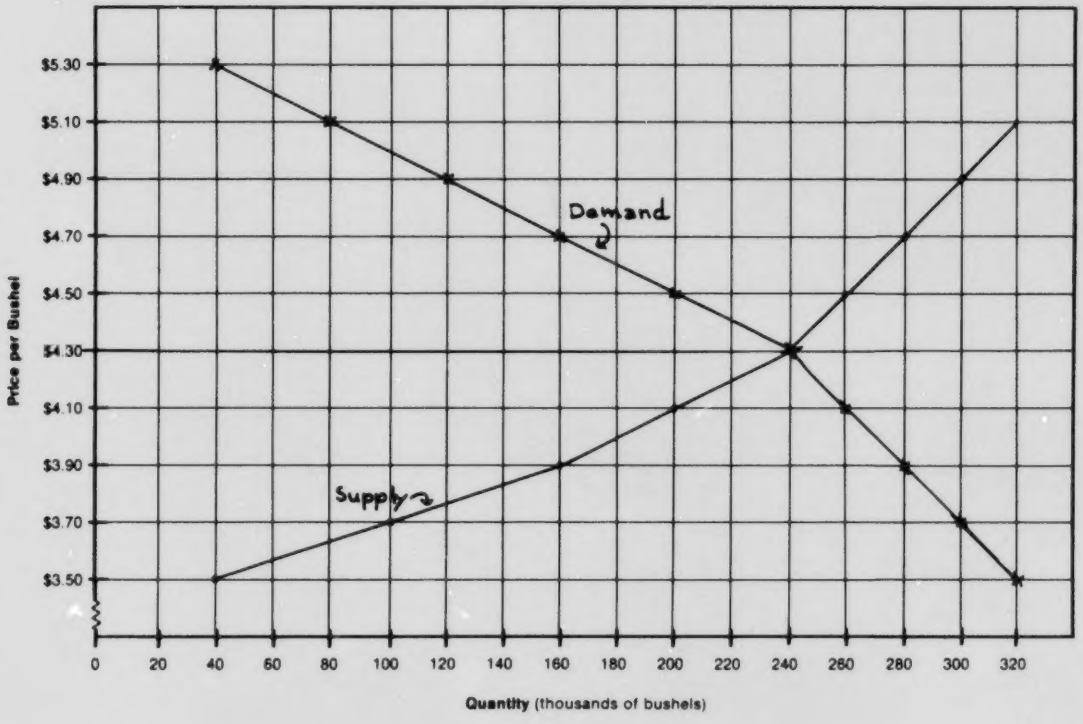


Figure 5-1

BUY CARDS

You are authorized to **BUY** 10 bushels of wheat, paying as **little** as possible. If you pay more than $5.30 per bushel, for a total of $53.00, you lose money.	You are authorized to **BUY** 10 bushels of wheat, paying as **little** as possible. If you pay more than $5.10 per bushel, for a total of $51.00, you lose money.	You are authorized to **BUY** 10 bushels of wheat, paying as **little** as possible. If you pay more than $4.90 per bushel, for a total of $49.00, you lose money.
You are authorized to **BUY** 10 bushels of wheat, paying as **little** as possible. If you pay more than $4.70 per bushel, for a total of $47.00, you lose money.	You are authorized to **BUY** 10 bushels of wheat, paying as **little** as possible. If you pay more than $4.50 per bushel, for a total of $45.00, you lose money.	You are authorized to **BUY** 10 bushels of wheat, paying as **little** as possible. If you pay more than $4.30 per bushel, for a total of $43.00, you lose money.
You are authorized to **BUY** 10 bushels of wheat, paying as **little** as possible. If you pay more than $4.10 per bushel, for a total of $41.00, you lose money.	You are authorized to **BUY** 10 bushels of wheat, paying as **little** as possible. If you pay more than $3.90 per bushel, for a total of $39.00, you lose money.	You are authorized to **BUY** 10 bushels of wheat, paying as **little** as possible. If you pay more than $3.70 per bushel, for a total of $37.00, you lose money.
	You are authorized to **BUY** 10 bushels of wheat, paying as **little** as possible. If you pay more than $3.50 per bushel, for a total of $35.00, you lose money.	

Figure 5-2

SELL CARDS

You are authorized to **SELL** 10 bushels of wheat for as **much** as possible. If you accept less than $5.10 per bushel, for a total of $51.00, you lose money.	You are authorized to **SELL** 10 bushels of wheat for as **much** as possible. If you accept less than $4.90 per bushel, for a total of $49.00, you lose money.	You are authorized to **SELL** 10 bushels of wheat for as **much** as possible. If you accept less than $4.70 per bushel, for a total of $47.00, you lose money.
You are authorized to **SELL** 10 bushels of wheat for as **much** as possible. If you accept less than $4.50 per bushel, for a total of $45.00, you lose money.	You are authorized to **SELL** 10 bushels of wheat for as **much** as possible. If you accept less than $4.30 per bushel, for a total of $43.00, you lose money.	You are authorized to **SELL** 10 bushels of wheat for as **much** as possible. If you accept less than $4.10 per bushel, for a total of $41.00, you lose money.
You are authorized to **SELL** 10 bushels of wheat for as **much** as possible. If you accept less than $3.90 per bushel, for a total of $39.00, you lose money.	You are authorized to **SELL** 10 bushels of wheat for as **much** as possible. If you accept less than $3.70 per bushel, for a total of $37.00, you lose money.	You are authorized to **SELL** 10 bushels of wheat for as **much** as possible. If you accept less than $3.50 per bushel, for a total of $35.00, you lose money.

Figure 5-3

CLASS TALLEY SHEET

Price Per Bushel	Round 1	Round 2	Round 3	Round 4	Round 5	Total of Rounds 2-5
$3.50						
$3.70						
$3.90						
$4.10						
$4.30						
$4.50						
$4.70						
$4.90						
$5.10						
$5.30						

Handout 5-1

HOW TO PLAY "A MARKET IN WHEAT"

Name _____ Class _____

Read these instructions carefully as your teacher reads them aloud.

1 The students who wear arm bands are SELLERS of wheat.

2 The students without arm bands are BUYERS of wheat.

3 Each buyer will have only one buy order at a time. It will say, "You are authorized to **buy** 10 bushels of wheat, paying as **little** as possible. If you pay more than _____ per bushel, for a total of _____, you lose money." The exact price and total will be written on the order. DO NOT REVEAL THE PRICE. Record the price on your buy order on your student score sheet. When the round starts, try to buy at the lowest price you can. You may buy at a price higher than that on your buy card in order to obtain your wheat. As soon as you have bought wheat, record the transaction on your score sheet. Then, turn the buy and sell cards in and get another buy order from the teacher. If you have bought no wheat during a round, get a different buy order from the teacher before the start of the next round.

4 Each seller will have only one sell order at a time. It will say, "You are authorized to **SELL** 10 bushels of wheat for as **much** as possible. If you accept less than _____ per bushel, for a total of _____, you lose money." The exact price and total will be written on the order. DO NOT REVEAL THE PRICE. Record the price on your sell order on your student score sheet. When the round starts, try to sell your wheat at the highest price you can. You may sell at a price lower than that on your sell order in order to get rid of your wheat. As soon as you have sold wheat, record the transaction on your score sheet. Then go to the teacher to report the selling price and get another card. If you have sold no wheat during a round, get a different sell order from the teacher before the start of the next round. Remember, the SELLER reports the price.

5 When the teacher says "Start," sellers and buyers should meet and try to agree on a price for 10 bushels of wheat. Any buyer can talk with any seller.

6 The goal of both buyers and sellers is to make a profit. The buyers do so by buying wheat for a lower price than is shown on their cards. The sellers do so by selling for a higher price than is on their cards.

7 All students are free to make as many transactions in a round as time permits.

8 Every time a seller reports an agreement to the teacher, it will be entered on the tally sheet the teacher is keeping. WATCH THE TALLY SHEET SO THAT YOU WILL KNOW WHAT PRICES ARE BEING PAID.

9 As soon as buyers and sellers receive new cards during a round, they should return to the market to try to reach another agreement with each other or with different buyers and sellers.

HOW TO USE THE SCORE SHEET (Handout 5-2)

Keep track of your progress during the game on this score sheet. Tally your gains and losses by taking the difference between the dollar worth of the ten bushels as stated on your card and the dollar worth of the transaction.
If you are a buyer, you will make a gain if you buy at a lower total than the amount shown on your card. If you buy at a higher total, you will suffer a loss.
If you are a seller, you will gain if you sell at a higher total than the amount shown on your card. At a lower total, you will suffer a loss.
When the teacher instructs you to do so, total your gains and losses and write them in the designated spaces.

From *Master Curriculum Guide in Economics: Teaching Strategies for High School Economics Courses*. 1985. Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016.

Handout 5-2

SCORE SHEET FOR "A MARKET IN WHEAT"

Name _____ Class _____

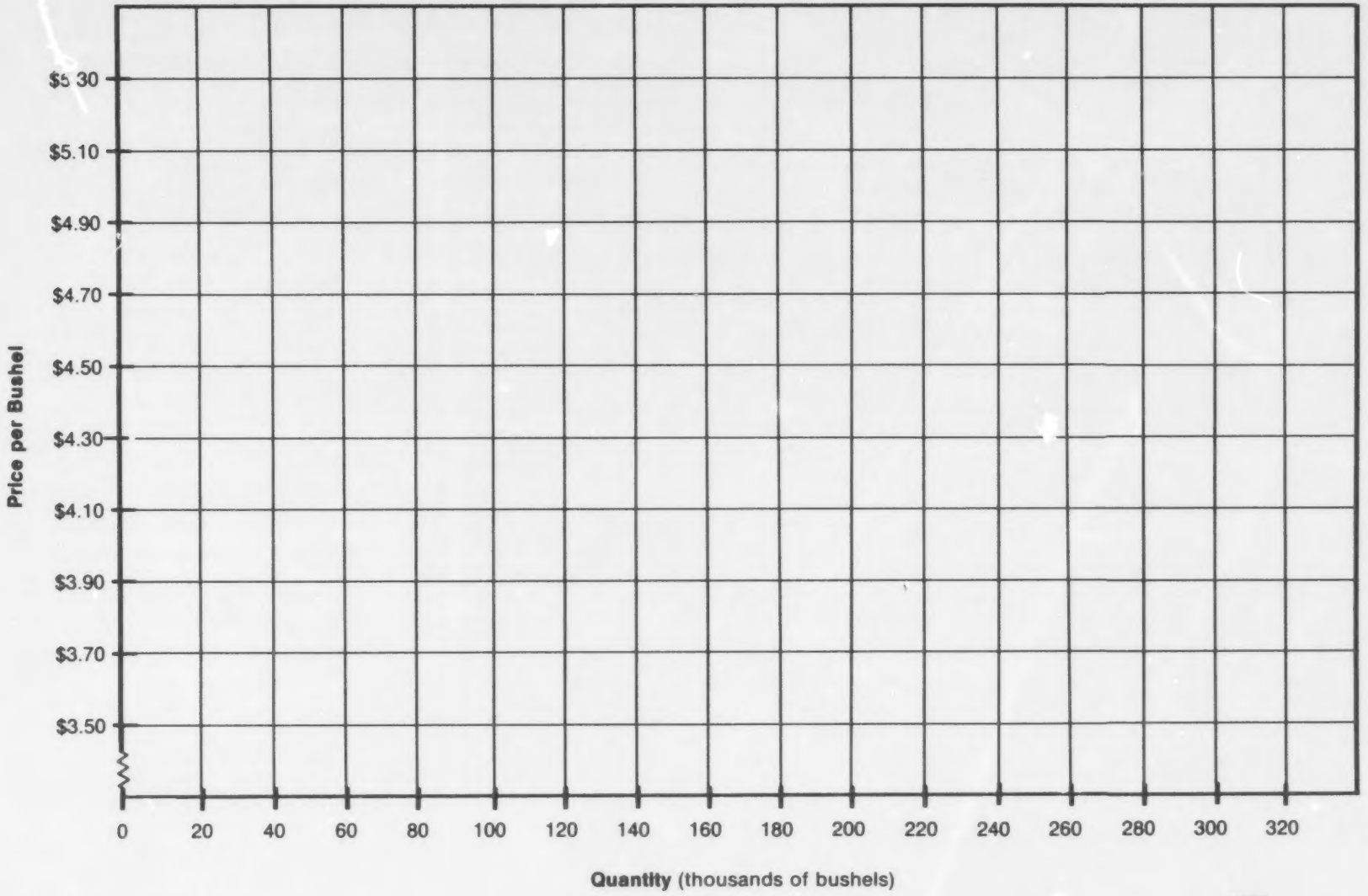
Circle one: Buyer Seller

Transaction Number	Price per Bushel		Dollar Worth of 10 Bushels		Gain	Loss	Profit (gain minus loss)
	On Card	In Transaction	On Card	In Transaction			
1							
2							
3							
4							
TOTAL FOR ROUND 1							
1							
2							
3							
4							
TOTAL FOR ROUND 2							
1							
2							
3							
4							
TOTAL FOR ROUND 3							
1							
2							
3							
4							
TOTAL FOR ROUND 4							
1							
2							
3							
4							
TOTAL FOR ROUND 5							
GRAND TOTAL							

From *Master Curriculum Guide in Economics: Teaching Strategies for High School Economics Courses*. 1985. Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016.

Handout 5-3

WHEAT SUPPLY AND DEMAND



Handout 5-4

SUPPLY SCHEDULE: In the following table, the supply schedule in the third column = cumulative number of bushels of wheat available for sale at the price indicated or at a higher price.

Price	No. of Sellers Willing to Sell 10 Bushels of Wheat at the Price Indicated or at a Higher Price	Supply Schedule
$3.50	4 sellers (= 40 bushels)	40
3.70	6 sellers (= 60 bushels)	100
3.90	6 sellers (= 60 bushels)	160
4.10	4 sellers (= 40 bushels)	200
4.30	4 sellers (= 40 bushels)	240
4.50	2 sellers (= 20 bushels)	260
4.70	2 sellers (= 20 bushels)	280
4.90	2 sellers (= 20 bushels)	300
5.10	2 sellers (= 20 bushels)	320

DEMAND SCHEDULE: In the following table, the demand schedule in the third column = cumulative number of bushels of wheat buyers would be willing and able to buy at the price indicated or at a lower price.

Price	No. of Buyers Willing to Buy 10 Bushels of Wheat at the Price Indicated or at a Lower Price	Demand Schedule
$5.30	4 buyers (= 40 bushels)	40
5.10	4 buyers (= 40 bushels)	80
4.90	4 buyers (= 40 bushels)	120
4.70	4 buyers (= 40 bushels)	160
4.50	4 buyers (= 40 bushels)	200
4.30	4 buyers (= 40 bushels)	240
4.10	2 buyers (= 20 bushels)	260
3.90	2 buyers (= 20 bushels)	280
3.70	2 buyers (= 20 bushels)	300
3.50	2 buyers (= 20 bushels)	320

From *Master Curriculum Guide in Economics: Teaching Strategies for High School Economics Courses*, 1985. Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016

Handout 5-5

MARKET GAME TEST

Name _____ Class _____

a What does the term "supply" mean? _____

b What does the term "demand" mean? _____

c In your own words, explain the law of supply and demand, i.e. (1) the relationship between quantity supplied and price and (2) the relationship between quantity demanded and price. _____

d Use the following terms to complete the sentences below. You will not need to use all of the terms.

INCREASE REMAIN UNCHANGED BE LESS
DECREASE BE GREATER

(1) If everything else remains the same, the amount of wheat avilable for sale at a price of $4.90 per bushel would probably _____ than the amount available for sale at a price of $3.90 per bushel.

(2) However, the demand for wheat would _____ at $4.90 than at $3.90 per bushel.

(3) All things being equal, if less wheat were demanded then the prices charged for wheat would probably _____.

(4) If the amount of wheat for sale doubled and the amount of wheat people were willing to buy doubled, the price would probably _____.

From *Master Curriculum Guide in Economics: Teaching Strategies for High School Economics Courses*. 1985. Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016.

Lesson 6

The Market Never Stands Still

TIME REQUIRED Two class periods

CONCEPTS Supply and demand
Markets and prices
Graphs and charts

INSTRUCTIONAL OBJECTIVES Students will

- List and describe the determinants of demand;
- List and describe the determinants of supply;
- Determine, under specified conditions, in which direction a demand curve should shift;
- Determine, under specified conditions, in which direction a supply curve should shift;
- Describe shifts in demand and supply curves as increases or decreases;
- Explain the difference between a change in demand and a change in the quantity demanded;
- Explain the difference between a change in supply and a change in the quantity supplied.

RATIONALE In order to comprehend the dynamic nature of competitive markets, students should understand the factors that affect supply and demand, that is, the determinants of supply and the determinants of demand. After studying these determinants, students should understand how shifts in supply and demand occur.

MATERIALS

1 A transparency of Handout 6-1 and/or a copy of the handout for each student

2 A copy of Handouts 6-2 and 6-3 for each student

3 An overhead projector

PROCEDURE

1 Project a transparency of Handout 6-1. You may also wish to provide a copy for all students so they can refer to Handout 6-1 when they work on Handouts 6-2 and 6-3.

2 On the transparency of Handout 6-1, point out that a movement of demand from curve D_1 to curve D_2 is an increase in demand for every given price. Such an increase is called a *shift* in demand. If the demand were to shift from curve D_2 to curve D_1, there would also be a shift in demand, but this shift would mean a decrease in demand for every given price.

3 Drive home to the students that an increase in the demand for doughnuts means that more doughnuts are demanded at every price. Ask questions such as these:

- What quantity of doughnuts is demanded at point *A*? (20) At point *B*? (40)
- What quantity is demanded at point *C*? (40) At point *D*? (60)
- What quantity is demanded at point *E*? (50) At point *F*? (70)
- What conclusion can be drawn from these data? (On demand curve D_2, 20 more doughnuts are demanded at every price than on demand curve D_1.)

4 Ask a student to draw a curve on the transparency that illustrates a decrease in demand from D_1. Have the student label the curve D_0. (Curve D_0 should be to the left of D_1.)

5 Ask the students whether a movement from point *A* to point *C* on curve D_1 shows an increase in the demand for doughnuts. (No. It shows an increase in the quantity demanded, which was caused by a decrease in price from $2.00 to $1.00. Stress—and make sure students understand—that a movement along a demand curve is called a change in the quantity demanded; a shift in position of the entire curve is called a change in demand. This distinction is vital.)

6 Explain the determinants of demand, i.e., the factors that cause a shift in demand. Some of the determinants of demand are:

- A change in consumer tastes. If a new study revealed that doughnuts are very nutritious, the demand for doughnuts probably would increase. If a new study said doughnuts are a harmful food, the demand for doughnuts would probably decrease.
- A change in income. If people earn more money, they may buy more doughnuts; if they earn less money, they may buy fewer.
- A change in the number of consumers.

- A change in the price of complementary goods. If the price of coffee increases, people may buy fewer doughnuts to eat with coffee because they drink less coffee. If the price of coffee goes down and people drink more coffee, they may also buy more doughnuts.

- A change in the price of substitute goods. If the price of cereal increases, people may eat more doughnuts for breakfast instead of cereal; if the price of cereal decreases they may eat fewer doughnuts for breakfast.

- A change in consumer expectations. If the price of doughnuts is expected to rise, people may buy more today than they would otherwise and freeze some of the doughnuts to eat later. They will then buy fewer doughnuts later. Consumer expectations may play a particularly important role in the demand for goods that cost a good deal—everything from major articles of clothing to automobiles. If consumers expect prices to go down because of seasonal changes or to make way for forthcoming new styles and models, consumers may delay their purchasing.

7 Distribute a copy of Handout 6-2 to each student. Go over the instructions with the students. Have them work individually or in small groups to complete the handout. If you stressed the determinants of demand, have the class do the optional exercise too.

8 Discuss the answers to the handout.

9 Project the transparency of Handout 6-1 again. Point out to the students that a movement of supply from curve S_1 to curve S_2 is an increase in supply for every given price. Such an increase is called a *shift* in supply. If supply were to shift from curve S_2 to curve S_1, there would also be a shift in supply, but this shift would indicate a decrease in supply.

10 Drive home to the students that an increase in the supply of doughnuts means that more doughnuts are supplied at every price. Ask questions such as these:

- What quantity of doughnuts is supplied at point *A*? (60) At point *B*? (70)

- What quantity is supplied at point *C*? (40) At point *D*? (50)

- What quantity is supplied at point *E*? (30) At point *F*? (40)

- What conclusions can be drawn from these data? (On supply schedule S_2, 10 more doughnuts are supplied at every price compared to schedule S_1.)

11 Ask a student to draw a curve on the transparency to illustrate a decrease in supply from S_1. Have the student label the curve S_0. (Curve S_0 should be to the left of S_1.)

12 Ask the students whether a movement from point *D* to point *B* shows an increase in the supply of doughnuts. (No. It shows an increase in the quantity supplied, which was caused by an increase in price from $1.00 to $2.00. Stress—and make sure students understand—that a movement along a supply curve is called a change in the quantity supplied; a shift of the entire curve is called a change in supply. This distinction is vital.)

13 Explain the determinants of supply, i.e. the factors that cause a shift in supply. Some of the determinants of supply are:

- A change in the cost of production. Anything that increases production costs will shift the supply curve to the left, i.e., every quantity will cost more to produce and will bear a higher market price. Anything that decreases production costs will shift the supply curve to the right, i.e., every quantity will cost less to produce and will bear a lower market price. Thus, an increase in doughnut makers' wages or in the price of flour would cause a decrease in the supply of doughnuts at a given price, and a decline in wages or the price of flour would cause an increase in the supply of doughnuts at a given price.

- An improvement in technology. Technological advances in production raise productivity and increase supply. A new, more efficient doughnut cooker would increase the supply of doughnuts.

- Natural disasters and other events can cause decreases in production. Poor weather in wheat-growing areas would probably decrease the supply of doughnuts. A strike by workers in doughnut factories could decrease supply—and in a major way if the strike went on for a long time.

- Government policies; for example, a tax on doughnuts would increase their cost and price and lead to a decrease in supply. Tariffs and quotas on imported doughnuts would decrease supply.

14 Distribute a copy of Handout 6-3 to each student. Go over the instructions with the students. Have them work individually or in small

groups to complete the handout. If you stressed the determinants of supply, have the class do the optional exercise too.

15 Discuss the answers to the handout.

EVALUATION

1 Examine the students' work on Handouts 6-2 and 6-3.

2 Ask students to select items from recent newspapers or magazines that illustrate increases or decreases in supply or demand. Have them prepare a brief explanation to accompany each item.

ANSWERS TO QUESTIONS IN HANDOUTS

Handout 6-2

1	increase, D	**5**	no change, C
2	increase, E	**6**	decrease, B
3	decrease, D	**7**	decrease, A
4	decrease, C	**8**	increase, B

Optional Bonus:

Consumer expectations—1
Consumer tastes—4, 8
Number of consumers—2
Income—6
Substitute—3
Complement—7

Handout 6-3

1	increase, D	**5**	decrease, B
2	increase, E	**6**	decrease, A
3	decrease, D	**7**	no change, A
4	decrease, C		

Optional Bonus:

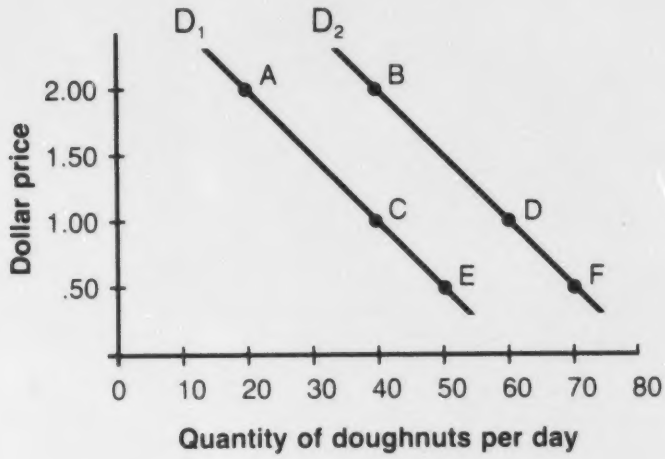
Change in the cost of production—1, 5
Change in technology—2
Natural disaster/other event—3, 6
Government policies—4

Handout 6-1

SHIFTS IN DEMAND AND SUPPLY

Name _____ Class _____

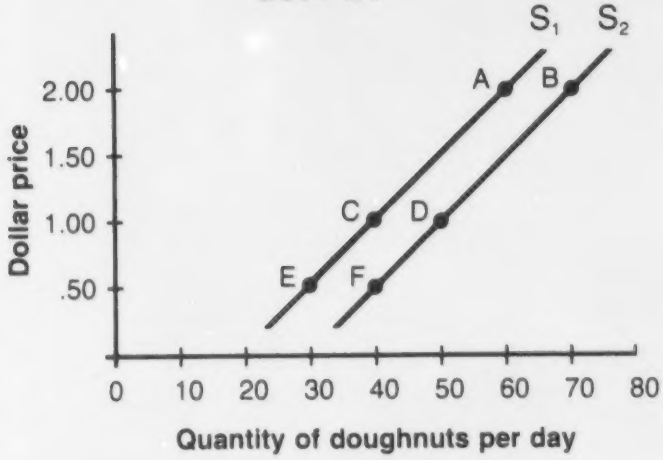
DEMAND



⟶ INCREASES ⟶

⟵ DECREASES ⟵

SUPPLY



⟶ INCREASES ⟶

⟵ DECREASES ⟵

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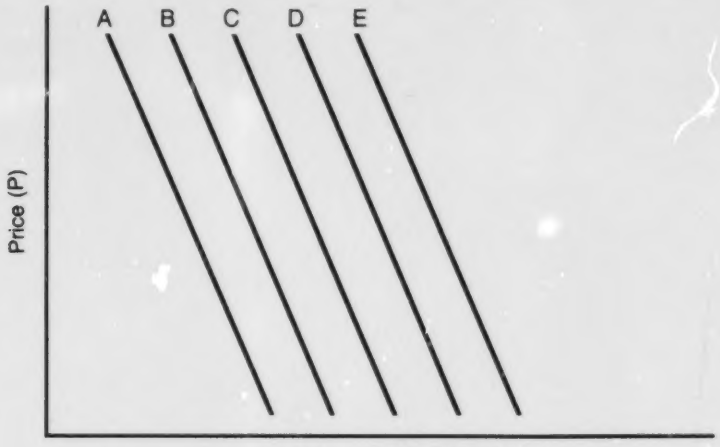
Handout 6-2

REASONS FOR CHANGES IN DEMAND

Name _____ Class _____



Read the following eight newspaper headlines. In each case decide if the event will cause a change in the demand for beef. If so, determine if it is an increase or a decrease, and write the correct answer. Begin at curve *C*. If you think headline 1 means there will be a decrease in demand, write "decrease" in the first blank and "B" in the second blank; move to curve B to do headline 2. If you think demand will increase, write "increase" and "D" in the blanks for headline 1; move to curve D to do headline 2.

Move only one curve at a time. Do not skip from say *A* to *C* even if you think the headline means there will be a large change in demand. Do not go beyond the five curves. If you are at *A* and the next headline implies a decrease in demand, you goofed somewhere. There is one headline which implies that the demand for beef does not change.

1 PRICE OF BEEF TO RISE IN JUNE
Demand _____ Curve _____

2 MILLIONS OF ALIENS SWELL U.S. POPULATION
Demand _____ Curve _____

3 PORK PRICES DROP
Demand _____ Curve _____

4 SURGEON GENERAL WARNS THAT EATING BEEF CAN BE HAZARDOUS TO HEALTH
Demand _____ Curve _____

5 MIGRATORY BIRDS HEAD NORTH; SUMMER AWAITS
Demand _____ Curve _____

6 REAL INCOME FOR AMERICANS DROPS 3RD MONTH IN ROW
Demand _____ Curve _____

7 CHARCOAL SHORTAGE THREATENS MEMORIAL DAY COOKOUTS
Demand _____ Curve _____

8 NATIONWIDE FAD: THE DISCO-BURGER
Demand _____ Curve _____

Optional bonus: Categorize each change in demand in the exercise above according to the reason that demand changed. Write the number of the headline(s) next to the reason for the change in demand. One category will have two headline numbers.

_____ A change in consumer expectations
_____ A change in consumer tastes
_____ A change in the number of consumers in the market
_____ A change in income
_____ A change in the price of a substitute good
_____ A change in the price of a complementary good

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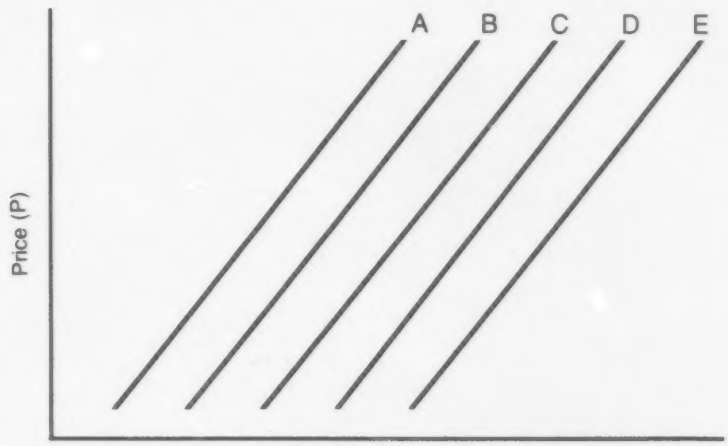
Handout 6-3

REASONS FOR CHANGE IN SUPPLY

Name _____ Class _____



Supply of foreign and domestically produced cars in the U.S. (Q)

Read the following seven newspaper headlines. In each case, decide if the event will cause any change in the supply of cars. If so, determine if it is an increase or a decrease, and write the correct answer. Begin at curve *C*. If you think headline 1 means there will be a decrease in supply, write "decrease" in the first blank and "B" in the second blank; move to curve B to do headline 2. If you think supply will increase, write "increase" and "D" in the blanks for headline 2; move to curve "D" to do headline 3.

Move only one curve at a time. Do not skip from say *A* to *C* even if you think the headline means there will be a large change in supply. Do not go beyond the five curves. If you are at *A* and the next headline implies a decrease in supply, you goofed somewhere. There is one headline which implies that the supply of cars does not change.

1 AUTO WORKERS UNION AGREES TO WAGE AND FRINGE CUTS
Supply _____ Curve _____

2 NEW ROBOT TECHNOLOGY INCREASES EFFICIENCY
Supply _____ Curve _____

3 NATIONWIDE AUTO STRIKE BEGAN AT MIDNIGHT
Supply _____ Curve _____

4 NEW AUTO IMPORT QUOTAS REDUCE FLOW OF FOREIGN CARS
Supply _____ Curve _____

5 COST OF STEEL RISES
Supply _____ Curve _____

6 AUTO PRODUCER GOES BANKRUPT, CLOSES OPERATION
Supply _____ Curve _____

7 BUYERS REJECT NEW MODELS
Supply _____ Curve _____

Optional bonus: Categorize each change in supply according to the reason that affected supply. Write the number of the headline next to the reason for the change in supply. In some cases, more than one headline could be matched to a reason.

_____ A change in the cost of production
_____ A change in technology
_____ Natural disaster/other event that causes decrease in production
_____ Government policies

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Lesson 7

The Equilibrium Price and Quantity

TIME REQUIRED Two class periods

CONCEPTS Markets and prices
Supply and demand
Market-clearing price,
Market-clearing quantity

INSTRUCTIONAL OBJECTIVES Students will

- Use supply and demand graphs to determine what the market-clearing price and quantity are;
- Analyze the effects of increases and decreases in supply and demand on price and quantity;
- Distinguish between shifts in supply and demand and changes in quantities supplied and demanded.

RATIONALE The forces of supply and demand work to establish a price at which the quantity of goods and services people want to buy is equal to the quantity suppliers wish to provide. This lesson will help students use the concepts of supply and demand to determine the equilibrium price and quantity and to determine how changes in the market affect price and quantity.

MATERIALS

1 A copy of Handouts 7-1, 7-2, and 7-3 for each student

2 A transparency of Visual 7-1

3 An overhead projector

PROCEDURE

1 Distribute copies of Handouts 7-1 and 7-2 to each student. Explain to the students that they should follow Handout 7-1 step by step. When the directions in the handout indicate that supply and demand curves should be plotted, students should do so on the chart provided in Handout 7-2. In answering some of the questions on Handout 7-1, students will have to refer to the supply and demand curves they drew on Handout 7-2.

2 Go over the answers to Handout 7-1. Project the transparency of Visual 7-1, which shows the correct supply and demand curves. Make sure the students understand the difference between changes in quantity supplied and demanded and shifts in supply and demand.

3 After you have gone over the answers, discuss questions such as these:

- What can cause the quantity demanded of gasoline to change? (A change in the price of gasoline)
- What can change the demand for gasoline? (Students should be able to give examples of each of the determinants of demand as listed in Lesson 6.)
- What happens to equilibrium price and quantity when demand increases? (Equilibrium price and the quantity exchanged increase.)
- What happens to equilibrium price and quantity when demand decreases? (Equilibrium price and the quantity exchanged decrease.)
- What can cause the quantity supplied of gasoline to change? (A change in the price of gasoline)
- What can change the supply of gasoline? (Students should be able to give examples of the determinants of supply as listed in Lesson 6.)
- What happens to equilibrium price and quantity when supply decreases? (Price rises and the quantity exchanged falls.)
- What happens to equilibrium price and quantity when supply increases? (Price falls and the quantity exchanged rises.)

EVALUATION Use Handout 7-3. Have students complete the handout. Assess their answers.

ANSWERS FOR HANDOUT 7-1

1 What is the relationship between price and quantity of gasoline demanded? (The higher the price, the lower the quantity demanded. The relationship is inverse.)

2 What is the relationship between price and quantity of gasoline supplied? (The higher the price, the higher the quantity supplied. The relationship is direct.)

3 Market-clearing price = $.80; market-clearing quantity = 40 million gallons bought and sold.

4 Why is this the market-clearing price? (It is the point at which the supply and demand curves intersect, and the market "clears," i.e., the quantity supplied to the market equals the quantity demanded in the market. At higher prices, producers would not be able to sell all that is supplied. The resulting surplus would tend to cause prices to fall. At prices lower than $0.80, a shortage would develop and tend to cause prices to rise.)

5 Market-clearing price = $1.20; market-clearing supply = 55 million gallons bought and sold.

6 Market-clearing price = $1.45; market-clearing supply = 45 million gallons bought and sold.

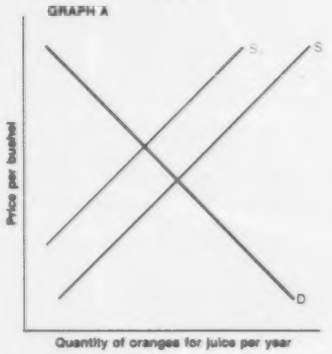
7 Indicate how the newspaper headlines affect supply and demand and equilibrium price and quantity.

	Demand	Supply	Price	Quantity
b	—	↑	↓	↑
c	↑	—	↑	↑
d	↓	—	↓	↓
e	↑	—	↑	↑

ANSWERS FOR HANDOUT 7-3

1 decrease, supply

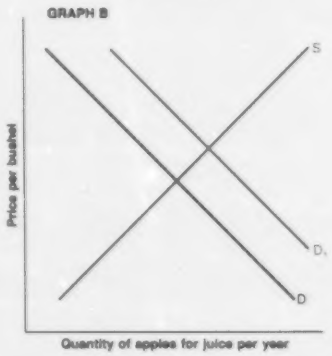
2



3 decrease, demanded

4 increase, demand

5



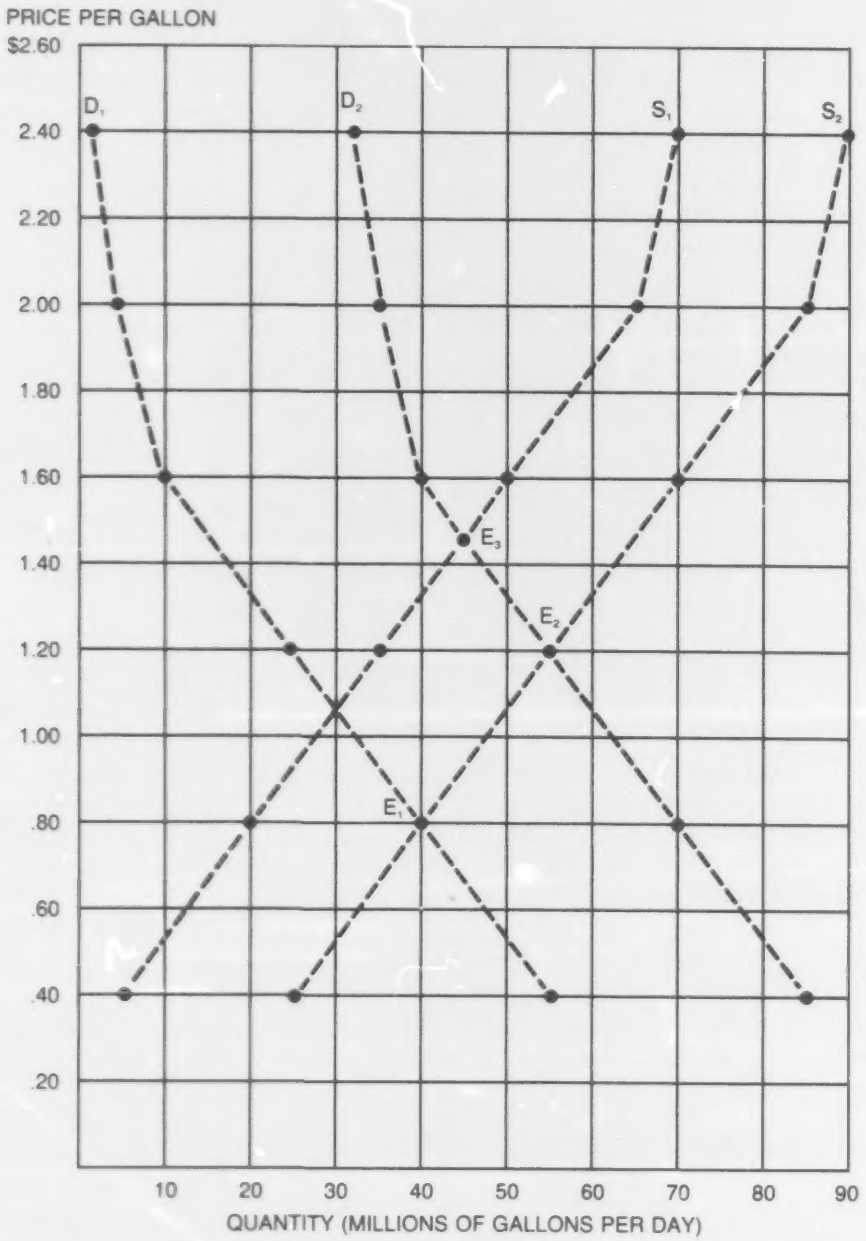
6 increase, supplied

7 **a** increased **c** decreased
b increased **d** increased

Visual 7-1

DEMAND AND SUPPLY OF GASOLINE

Name _____ Class _____



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Handout 7-1

CHANGES IN THE DEMAND AND SUPPLY OF GASOLINE

Name _____ Class _____

1 A group of economists studied the gasoline market. They wanted to find out how many gallons consumers would buy each day at various prices. Let us suppose that through market research, they found that

If the price of a gallon of gasoline was	*People would buy*
$0.40	55 million gallons
0.80	40 million gallons
1.20	25 million gallons
1.60	10 million gallons
2.00	5 million gallons
2.40	1 million gallons

This information is called a **demand schedule.** Plot the data on the blank graph (Handout 7-2) and connect the dots with a line. This line is called a **demand curve.** Label it D_1. What is the relationship between price and the quantity of gasoline demanded?_____

_____

2 The economists also surveyed sellers to determine how many gallons of gasoline they would be willing to sell each day at various prices. They found that

If the price of a gallon of gasoline was	*Sellers would sell*
$0.40	25 million gallons
0.80	40 million gallons
1.20	55 million gallons
1.60	70 million gallons
2.00	85 million gallons
2.40	90 million gallons

This information is called a **supply schedule.** Plot the data on the graph (Handout 7-2) and connect the dots with a line. This line is called a **supply curve.** Label it S_1. What is the relationship between price and the quantity of gasoline supplied?_____

_____

3 According to the graph, the market-clearing (or equilibrium) price for gasoline is _____ and the number of gallons of gasoline bought and sold is _____. Label this equilibrium point E_1.

4 Why is this the market clearing price? _____

_____

5 Assume that big gas-guzzling cars are the latest fad. Because consumers buy so many gas guzzlers, they want to buy 30 million more gallons of gasoline per day at every price. For example, at $0.40 per gallon people now want to buy 85 million gallons rather than 55 million gallons. Plot the new demand schedule and draw the new demand curve on your graph, using this new information. Label the new curve D_2. What is the market-clearing price? _____ How many gallons will be bought and sold? _____ Label this new equilibrium point E_2.

6 Now assume that two oil-producing countries get into a war and destroy each other's oil wells. Because of this, sellers are willing to sell 20 million fewer gallons of gasoline per day at every price. For example, at $0.40 per gallon sellers are willing to sell only 5 million gallons rather than 25 million gallons. Plot the new supply schedule and draw the new supply curve on your graph. Label the new curve S_2. According to demand curve D_2 and supply curve S_2, what is the new market-clearing (or equilibrium) price? _____ How many gallons will be bought and sold? _____ Label this new equilibrium point E_3.

7 Indicate how the newspaper headlines below affect supply and demand and equilibrium price and quantity. Each headline describes a condition that affects either supply or demand, but not both. The first headline is completed for you. (Note that if the condition does not affect an alternative in a column—in the example, the condition described in the headline leaves demand unchanged—do not circle either arrow.)

		Demand	Supply	Equilibrium Price	Equilibrium Quantity
a	OPEC NATIONS AGREE ON QUOTAS—CUT PRODUCTION	↑ ↓	↑ ↓	↑ ↓	↑ ↓
b	NORTH SEA OIL BEGINS TO FLOW	↑ ↓	↑ ↓	↑ ↓	↑ ↓
c	ECONOMIC RECOVERY SPREADS WORLDWIDE	↑ ↓	↑ ↓	↑ ↓	↑ ↓
d	NEW GAS-SAVING ENGINE ANNOUNCED	↑ ↓	↑ ↓	↑ ↓	↑ ↓
e	NATIONAL STRIKE: MASS TRANSIT SHUTDOWN	↑ ↓	↑ ↓	↑ ↓	↑ ↓

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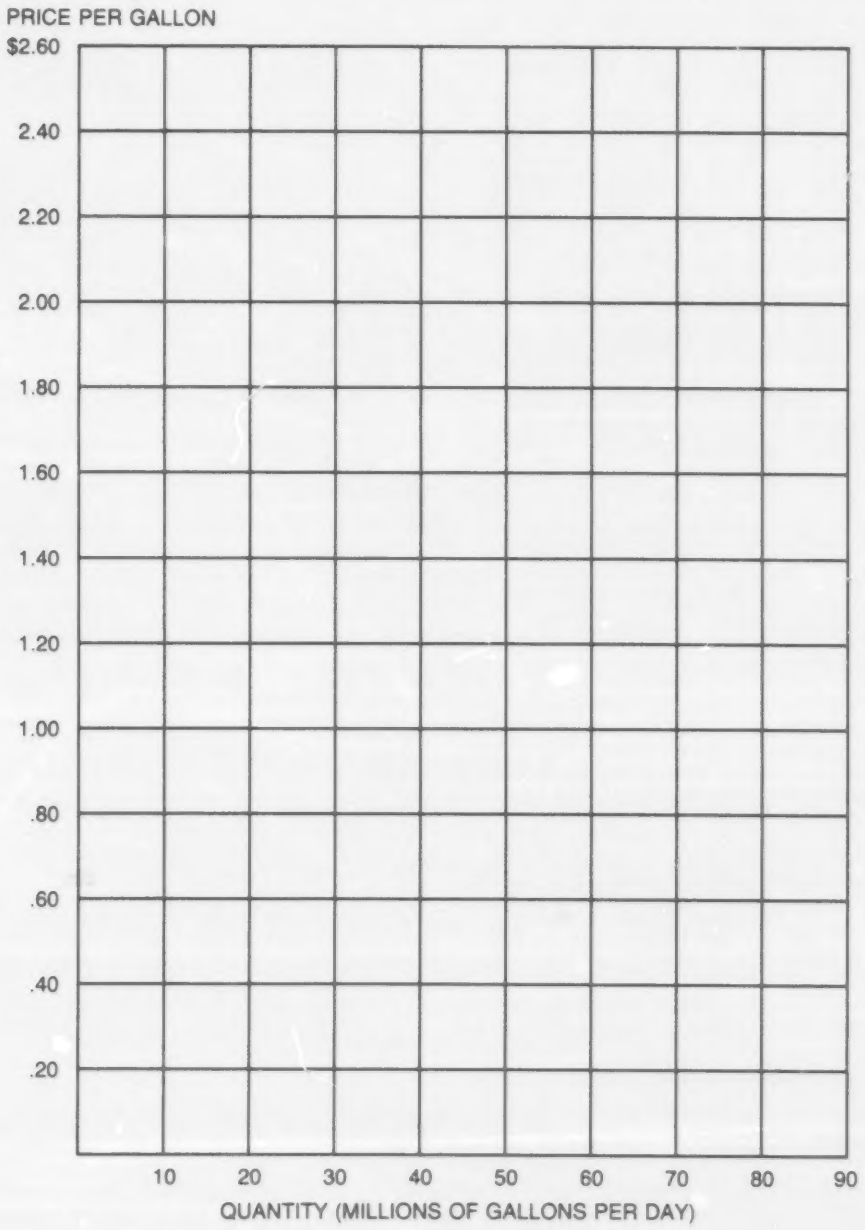
Handout 7-2

DEMAND AND SUPPLY OF GASOLINE

Name _____ Class _____



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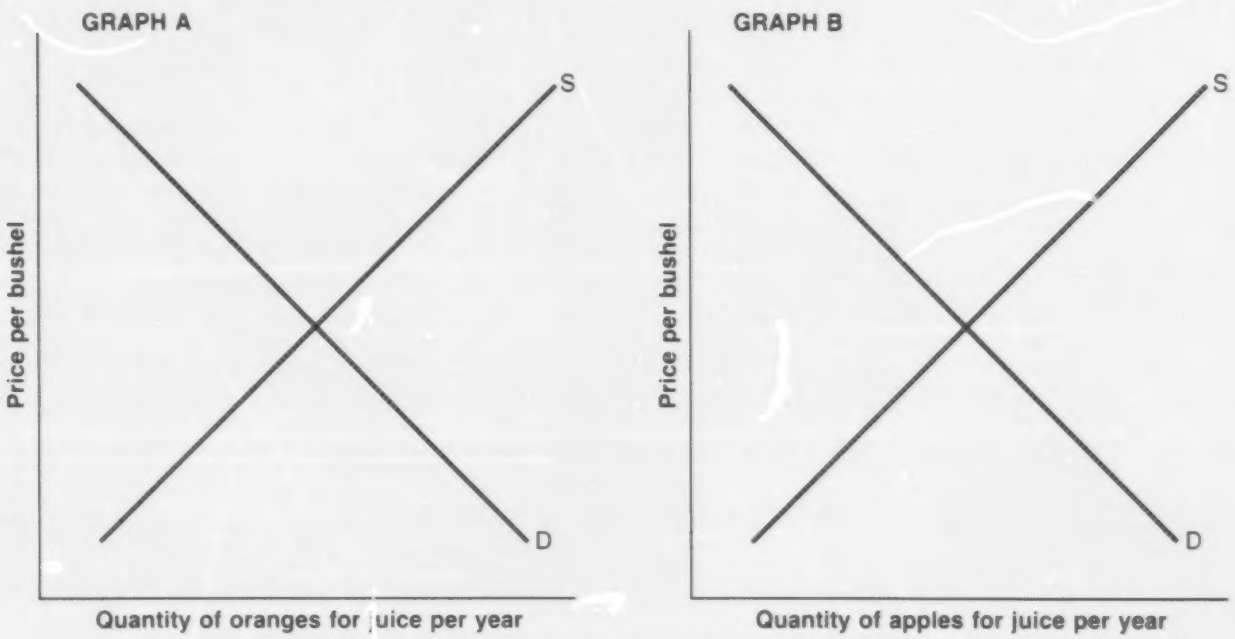
Handout 7-3

EQUILIBRIUM PRICE AND QUANTITY

Name _____ Class _____



A frost has killed much of the expected crop of juice oranges in Florida. Refer to the graphs above to answer the following questions.

1 Circle the correct words:
There will be a(n) *increase/decrease* in the *demand/supply* of oranges.

2 On graph A, draw the new demand or supply curve and label it D_1 or S_1. For example, if you think the result of the frost will be an increase in the demand for oranges, draw a new demand curve showing this result; label the curve D_1.

3 Circle the correct words:
There will be a(n) *increase/decrease* in the quantity of oranges *demanded/supplied.*

4 Circle the correct words:
There will be a(n) *increase/decrease* in the *demand/supply* of apples, as a result of the frost's effect on the juice orange crop.

5 On graph B, draw the new demand or supply curve in the apple market and label it D_1 or S_1. For example, if you think the supply of apples will increase, draw a new supply curve; label it S_1.

6 Circle the correct words:
There will be a(n) *increase/decrease* in the quantity of apples *demanded/supplied.*

7 What will happen to:
- **a** The market price of apples?
- **b** The market price of oranges?
- **c** The quantity of oranges bought and sold?
- **d** The quantity of apples bought and sold?

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Lesson 8

Markets Allocate Resources

TIME REQUIRED Two class periods

CONCEPTS Markets and prices
Information
Incentives
Rationing
Supply and demand
Charts and graphs

INSTRUCTIONAL OBJECTIVES Students will

- Analyze how changes in one market affect other markets;
- Explain how markets provide information;
- Illustrate how buyers and sellers respond to the incentives provided by changing markets.

RATIONALE This lesson includes a simple market model that uses supply and demand curves. The model serves as a useful tool with which to analyze the impact of market changes on price and quantity. More importantly, the model illustrates how the apparently chaotic billions of individual choices made in a market result in an orderly allocation of scarce resources.

MATERIALS A copy of Handouts 8-1, 8-2, 8-3, and 8-4 for each student.

PROCEDURE

1 Give a copy of Handout 8-1 to each student. Tell students they will use the information in the reading when they do written work for the lesson.

2 Tell the students that as they read the article in the handout, they should underline all the goods the airlines are using less of and should circle all the goods and services the airlines are using more of. Give the class time to read the article and to circle or underline the items as directed.

3 Discuss the article with the class. Ask questions such as these:

- Which goods are the airlines using less of? (Blankets, pillows, magazines, paint, and coat closets.)
- Which goods are the airlines using more of? (Lightweight metal trays, lightweight seat covers, lightweight fabrics, lightweight metal parts, and lightweight life rafts.)
- Why are the airlines making all these changes? (The price of fuel went up, so they want to reduce the weight of their planes. The lighter the weight of a plane, the less fuel it will need to operate.)

4 Give a copy of Handout 8-2 to each student. Go over the directions. The answers to the first 3 graphs are completed to serve as examples. Discuss the examples.

5 Have the students complete the graphs. Discuss how prices allocate resources.

6 Give each student a copy of Handout 8-3. Explain that they will work in small groups to complete this assignment.

7 Divide the class into four groups: fabric manufacturers, lightweight metal manufacturers, paint manufacturers, and life raft manufacturers. Have each group select one person to serve as recorder.

8 Tell the groups they must respond to the questions on Handout 8-3 with answers appropriate to the industry they represent. Give the groups time to answer the questions. The recorders can use their own copies of the handout to record the group's answers. (Each student may fill out a sheet, too, as an aid in participating in the group's preparation of the answers.)

9 Have each group present its answers to the class. Answers will vary according to the industry. Discuss how each industry responds to the airlines' changes. Summarize how the economy in general responds to changes and the importance of market prices in accomplishing these changes.

EVALUATION

1 Use Handout 8-4 as a test.

2 Assess students' answers to Handout 8-2.

ANSWERS FOR HANDOUT 8-2

4 Lightweight metals—demand increases (curve shifts right)

5 Typesetters—demand decreases (curve shifts left)

6 Workers in paint making industry—demand decreases (curves shifts left)

7 Workers in lightweight metals—demand increases (curve shifts right)

8 Blankets—demand decreases (curve shifts left)

9 Airplane maintenance workers—demand increases (curve shifts right)

ANSWERS FOR HANDOUT 8-4

	Potatoes	Bread	Wheat	Wheat-Harvesting Equipment
Demand	—	↓	↓	↓
Supply	↑	—	—	—
Equilibrium price	↓	↓	↓	↓
Equilibrium quantity	↑	↓	↓	↓

	Leather	Leather Shoes	Shoelaces for Leather Shoes	Shoelace-Packaging Machinery
Demand	↑	—	↓	↓
Supply	—	↓	—	—
Equilibrium price	↑	↑	↓	↓
Equilibrium quantity	↑	↓	↓	↓

Handout 8-1

AIRLINES SHED WEIGHT, CUT SPEED TO SAVE FUEL

A WALL STREET JOURNAL *News Roundup*

Trans World Airlines used to put three "TWA Ambassador" magazines in each seat pocket of planes, but now there's only one. The reason: to save $343,000 a year in fuel costs. Airlines across the country are working hard at ways to alter flight operations and reduce weight to counter the enormous increase in the price of jet fuel. Seven years ago, TWA was paying 11 cents a gallon for fuel; today, it's nearly $1.

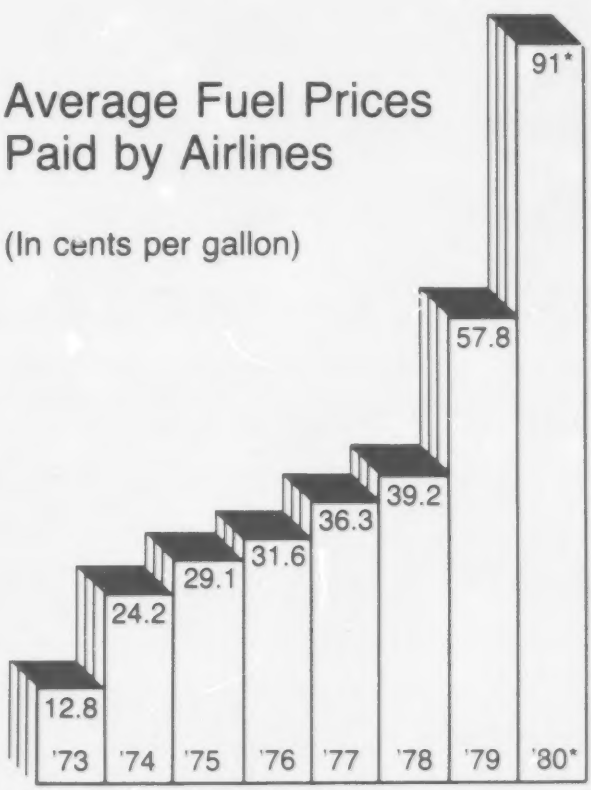
Some of the fuel-conservation measures are apparent to riders: Pacific Southwest Airlines, for instance, has eliminated its coat closets, blankets and pillows. United Airlines has turned to smaller seat buckles and lighter meal trays.

STRUCTURAL

- Paint removal. As much as 600 pounds of paint coat a Boeing 747, but carriers differ on whether removing paint is worth it. Eastern and American Airlines think so. Eastern says it costs less to maintain a metal exterior, and that it creates less friction as the plane flies, thus saving fuel. Delta Air Lines said it considered taking the paint off its planes, but decided against it. "That exposes the skin to all sorts of abrasions," which create drag and cut fuel efficiency, a spokesman says. Braniff International, with its pastel-hued planes, agrees. But some have simpler explanations. "It's our image," says a public relations official for Southwest Airlines, whose planes are mustard, red and orange. "When people see those colors, they think of us." Meanwhile, TWA is thinking about stripping the paint off its planes; United and Pacific Southwest Airlines are considering using lighter-weight paint.
- Lighter materials. Many airlines are saving weight by using lighter fabrics for seat coverings, as well as lighter seat assemblies and rugs. American Airlines has replaced the seats on its 93 Boeing 727s and figures that this will save $900,000 a year in fuel. TWA is replacing worn-out carpets with new ones that weigh 13.2 ounces less a square yard. On a jumbo 747, TWA says that adds up to a reduction of 351 pounds.

Some carriers are making more extensive use of composite materials, extremely strong and lightweight metals, for some airline parts. Northrop Corp., Boeing Co. and Lockheed Corp. are all working to expand the use of this material, which is stronger and lighter than aluminum.

While these are the main elements of airline conservation efforts, other tactics are also employed. Increased maintenance is used to smooth out nicks and dents. Lighter life rafts are being stored. . . .



SOURCE: Air Transport Association.
*Estimated

SOURCE: *Wall Street Journal*, August 22, 1980, p. 17. Reprinted by permission of The Wall Street Journal, © Dow Jones & Company, Inc. 1980. All Rights Reserved.

Handout 8-2

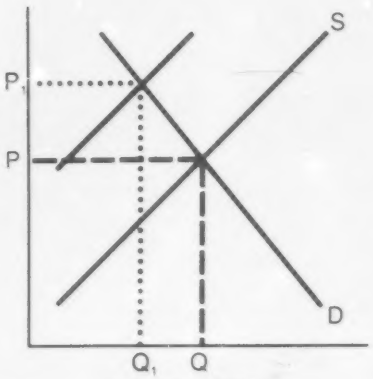
THE MARKET ALLOCATES RESOURCES

Name _____ Class _____

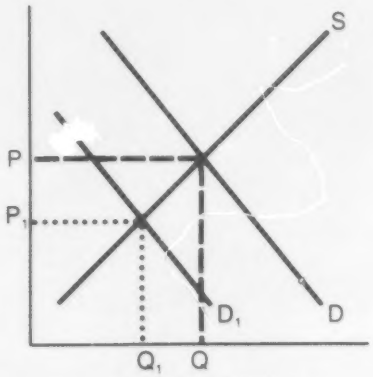
Instructions: This worksheet is based on the reading in Handout 8-1, "Airlines Shed Weight, Cut Speed to Save Fuel." The first three graphs below have been completed for you.

We begin with a decrease in the price of fuel. High oil production costs decreased the supply of jet fuel, thus shifting the supply curve to the left, from S to S_1. Because heavier planes use more fuel, the airlines' demand for magazines decreased, thus shifting the demand curve to the left. Because paint adds to the weight of a plane, the demand for paint decreased, thus also shifting the demand curve to the left.

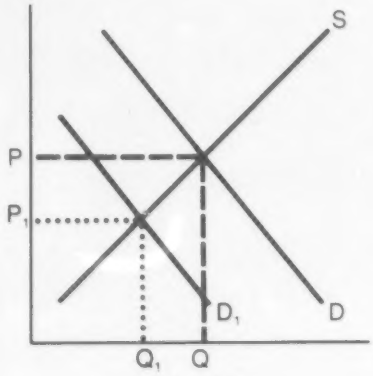
Now complete the rest of the graphs. Study the reading and use your knowledge of economics. Draw the new position of either the supply curve or the demand curve on each graph. Show only one change, and for one curve only.



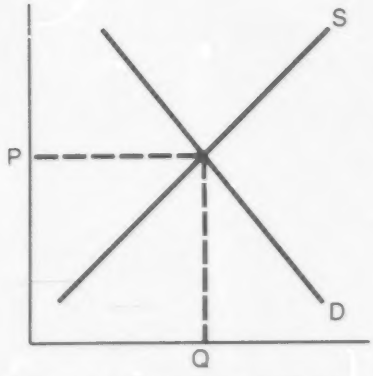
1 ***JET FUEL***



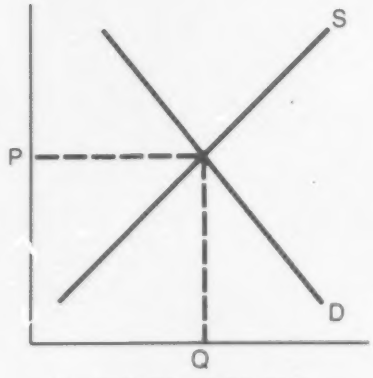
2 ***MAGAZINES***



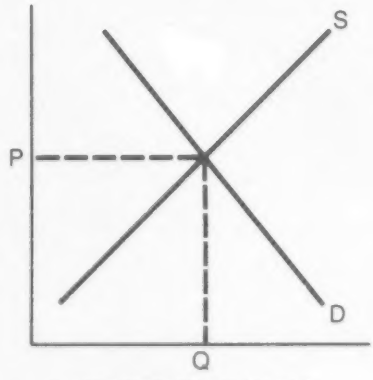
3 ***PAINT***



4 ***LIGHTWEIGHT METALS***



5 ***TYPESETTERS FOR AIRPLANE MAGAZINES***

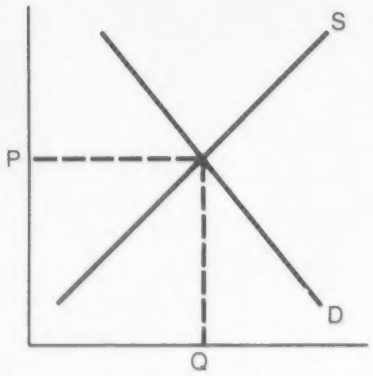


6 ***WORKERS IN PAINT-MAKING INDUSTRY***

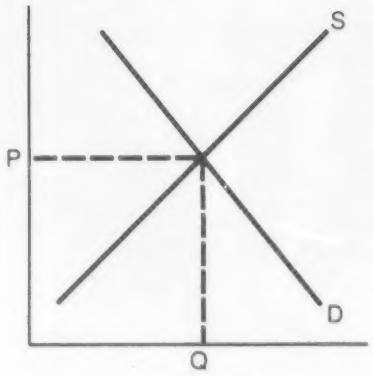
Continued

From *Master Curriculum Guide in Economics: Teaching Strategies for High School Economics Courses*. 1985. Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016.

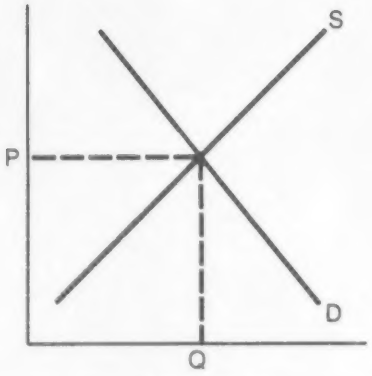
Handout 8-2 (concluded)



7 *WORKERS IN LIGHTWEIGHT METALS*



8 *BLANKETS*



9 *AIRPLANE MAINTENANCE WORKERS*

From *Master Curriculum Guide in Economics: Teaching Strategies for High School Economics Courses*, 1985. Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016

Handout 8-3

AIRLINES, FUEL, AND YOUR BUSINESS

Name _____ Class _____

1 What changes took place in your business as the airlines tried to cut fuel consumption?_____

_____

2 What signals from the market might have alerted you to the changes taking place?_____

_____

3 How might you respond to the changed market conditions? What would happen if you did not respond to the new situation?_____

_____

_____

4 List some resources (for example, workers, machinery, raw materials) that your business will now use to a greater or lesser extent as you respond to the changed market conditions._____

_____

_____

5 Draw a supply and demand graph of one resource listed in Question 4. Show how the market for the resource might change as a result of your industry's response to the airlines' actions.

_____

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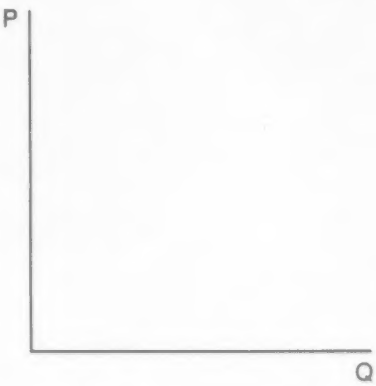


6 List several ways in which the alloction of scarce resources has changed due to the increase in jet fuel prices.

_____

_____

_____

7 How do markets help determine what to produce, how to produce, and for whom to produce?_____

_____

_____

_____

_____

From *Master Curriculum Guide in Economics: Teaching Strategies for High School Economics Courses*. 1985. Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016.

Handout 8-4

TEST ON MARKET ALLOCATION OF RESOURCES

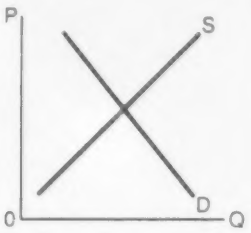
Name _____ Class _____

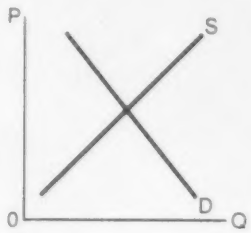
INSTRUCTIONS: The following questions refer to a group of related markets in the U.S. during a long period of time. Assume that the markets are perfectly competitive and that the supply and demand model is completely applicable. The diagrams show the supply and demand in each market *before* the assumed change occurs. Trace through the effects of the assumed change, *other things constant*. Work your way from left to right. Shift only one curve in each market.

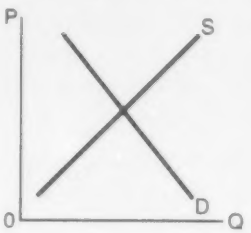
For each market, draw whatever new supply or demand curves are needed, labeling each new curve S_1 or D_1. Then circle the correct symbol under each diagram (↑ for increase, — for unchanged, and ↓ for decrease). Remember to shift only one curve in each market.

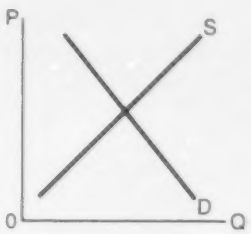
1 Assume that a new fertilizer dramatically increases the number of potatoes that can be harvested with no additional labor or machinery. Also assume that this fertilizer does not affect wheat farming and that people are satisfied to eat either potatoes or bread made from wheat flour.

2 Assume people's tastes change and there is an increase in the demand for briefcases and luggage made out of leather. How would this affect the leather market and related markets? Draw the new curves and circle the appropriate symbols in all four markets.

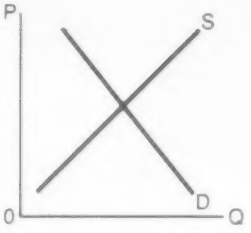


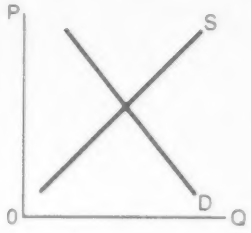


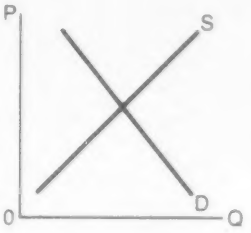


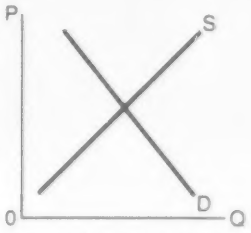


	POTATOES	***BREAD***	***WHEAT***	***WHEAT HARVESTING MACHINERY***
Demand:	↑ — ↓	↑ — ↓	↑ — ↓	↑ — ↓
Supply:	↑ — ↓	↑ — ↓	↑ — ↓	↑ — ↓
Equilibrium price:	↑ — ↓	↑ — ↓	↑ — ↓	↑ — ↓
Equilibrium quantity:	↑ — ↓	↑ — ↓	↑ — ↓	↑ — ↓









	LEATHER	***LEATHER SHOES***	***SHOELACES FOR LEATHER SHOES***	***SHOELACE PACKAGING MACHINERY***
Demand:	↑ — ↓	↑ — ↓	↑ — ↓	↑ — ↓
Supply:	↑ — ↓	↑ — ↓	↑ — ↓	↑ — ↓
Equilibrium price:	↑ — ↓	↑ — ↓	↑ — ↓	↑ — ↓
Equilibrium quantity:	↑ — ↓	↑ — ↓	↑ — ↓	↑ — ↓

SOURCE: Adapted from Phillip Saunders, *Introduction to Microeconomics, Student Workbook* (Bloomington, Ind.: Metropolitan Printing, 1984).

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Lesson 9

When There Are Floors and Ceilings

TIME REQUIRED Two class periods

CONCEPTS Markets and prices
Incentives
Rationing
Supply and demand
Exchange
Charts and graphs
Broad social goals

INSTRUCTIONAL OBJECTIVES Students will

- Define price ceilings and price floors;
- Analyze the effects of price controls on competitive markets;
- Describe the outcomes of price controls in terms of surpluses and shortages;
- Describe and evaluate the arguments for and against price controls.

RATIONALE Sometimes governments intervene in markets by establishing minimum prices (price floors) and maximum prices (price ceilings). Examples include controls on natural gas prices, rent controls, minimum wage legislation, and farm price supports. Because the effects of this form of government intervention are often far-reaching, students must be able to understand and evaluate the arguments for and against such action.

MATERIALS

1 A copy of Handouts 9-1, 9-2, 9-3, and 9-4 for each student

2 A transparency of Visual 9-1

3 An overhead projector

PROCEDURE

1 This lesson should be used only after students understand supply, demand, and equilibrium price and quantity. Students learn these concepts in Lessons 6 and 7.

2 Give a copy of Handout 9-1 to each student. Have the students examine the graph and answer the questions on the handout.

3 Project Visual 9-1 and ask the following questions:

- In a competitive market, how much would be exchanged and at what price? (120 units at $50)
- How would this price and quantity be established? (Review concepts in Lesson 7 on how equilibrium price and quantity are established.)
- What would occur if government regulations set the price at a maximum of $30? (A quantity of 160 would be demanded while a quantity of 60 would be supplied. There would be a shortage of 100 units.)
- Why would this shortage occur? (The imposed reduction in price is below the equilibrium price. At the reduced price, sellers would be willing to supply only 60 units, but the quantity demanded would rise to 160 units.)
- What would happen if government regulations set the price at a minimum of $80? (A quantity of 60 would be demanded while a quantity of 200 would be supplied. There would be a surplus of 140 units.)
- Why would this surplus occur? (Mandating a price above the equilibrium price decreases the quantity demanded and increases the quantity supplied.)

4 Tell students that an administered minimum price is called a price floor and is set in order to increase the price at which transactions take place, i.e., the "free" market price is less than the floor price. An administered maximum price is called a price ceiling and is set in order to limit the price at which transactions take place, i.e., the "free market" price is above the ceiling price. Draw the price ceiling and the price floor mentioned in Procedure 3, above, on the transparency of Handout 9-1. You might ask a student to point out which line is the price floor and which line is the price ceiling.

5 Ask the students for examples of actual price ceilings and floors. (Examples of price ceilings in-

clude control of natural gas prices and rent control. Examples of price floors include minimum wage legislation and farm price supports.)

6 OPTIONAL. If you played the Wheat Game (Lesson 5), you could illustrate the foregoing concepts as follows:

- Replay one round of the Wheat Game but with a $3.90 maximum price. Afterward, discuss with the students some of the differences in the game this time: Did they make as many transactions as before? Did buyers and sellers do better or worse than before? Did anyone cheat by buying or selling above the maximum price?

- Display the Wheat Game graph showing the supply and demand curves established by the seller and buyer decks. Draw a line across the graph horizontally from the $3.90 maximum price. Ask students to read the graph to determine how much wheat buyers will purchase at that price and how much sellers will offer at that price. Discuss what is meant by the term shortage in this context. Ask the students how the available wheat might be allocated to purchasers.

- Draw a horizontal line across the graph, starting at a price above the market clearing price, say $4.70. Ask the students how much wheat would be produced at this price and how much buyers would purchase. Discuss what the term "surplus" means in this context.

- Define price floor (legislated or regulated minimum price below which transactions are prohibited) and price ceiling (legislated or regulated maximum price above which transactions are prohibited).

7 Distribute a copy of Handout 9-2 to each student. Have the students answer the questions.

8 Discuss the answers to the questions. Students should be able to argue about alternative solutions to the problem.

9 Give a copy of Handout 9-3 to each student. Have students work in groups to answer the questions. You may then have each group make a report to the class. (Alternatively, students may work alone to complete one handout. Then have some of them report to the class.) In this exercise students use the decision-making model to analyze the economic issue of minimum wages. A discussion of minimum wages which uses this decision-making model starts on page 7 of this guide. It should be helpful in directing the discussion of this issue.

10 Distribute a copy of Handout 9-4 to each student. Have students answer the questions. If you used small groups for Handout 9-3, you may want to have the students work alone to complete Handout 9-4, and you can then use the handout as a test.

11 Discuss the economic issues concerning rent controls. Have the students go through the steps of the decision-making model as outlined in the answer key.

EVALUATION Assess the quality of students' answers on Handouts 9-2, 9-3, and 9-4.

ANSWERS TO QUESTIONS IN HANDOUTS

Handout 9-1

1 What is the market price? ($50)

2 What quantity is demanded and what quantity is supplied at the market price? (Quantity demanded = 120; quantity supplied = 120.)

3 What quantity is demanded and what quantity is supplied if the government passes a law requiring the price to be $30? (Quantity demanded = 160; quantity supplied = 60.)

4 What quantity would be demanded and what quantity would be supplied if the government passes a law requiring the price to be $80? (Quantity demanded = 60; quantity supplied = 200.)

Handout 9-2

1 Answer these questions on the basis of the information in the graph.

a Why is the supply curve a vertical line? (There are a fixed number of seats in the stadium. More cannot be created even if the price were set higher. [NOTE: A student may suggest that bleachers could be set up somewhere, but rule this out as impossible.])

b How many tickets are available at the university's price? (90,000.)

c How many tickets do football fans wish to buy at the university's price? (125,000)

d What is the problem in respect to supply and demand? (Quantity demanded is greater than quantity supplied. There is a shortage of tickets.)

e Does the graph illustrate a price floor or a price ceiling? (Ceiling.)

2 What are some means of eliminating the shortage of tickets in order to prevent "black marketing" or "scalping"? (Possible suggestions of

means of eliminating the shortage of tickets are given in answers 2a to 2f below, but note that only answers 2a and 2e will alleviate the shortage. The others will only shift the effects of the shortage from one group or person to another.)

a Raise the price to $120 per season.

b Hold a lottery.

c Sell some people tickets for only some games.

d Give preference to students and alumni.

e Lose a lot of football games; fewer people will want to see the games, which is equivalent to a shift in demand to the left (i.e., a decrease in demand).

f Sell the tickets on a first come, first served basis.

3 For each solution you put forward, answer the following questions. (Answers to the questions will vary.)

a Will the solution eliminate the shortage?

b Is the solution fair?

c Who benefits from the solution? Who loses?

d What is the best solution?

Handout 9-3

1 What is the issue? (The issue is whether to increase the minimum wage.)

2 Draw a supply and demand graph that illustrates the situation when a minimum wage is involved. Does the situation involve a price floor, a price ceiling, or neither? (A price floor.)

3 What broad social goals should you consider as you decide how to vote on this issue? (Some relevant broad social goals are full employment for teenagers, full employment for others, economic freedom, economic fairness, and economic equity.)

4 What are some alternative means of achieving these goals? (Some alternatives are: raise the minimum wage, keep the minimum wage the same, eliminate the minimum wage, eliminate the minimum wage for teenagers.)

5 What are some advantages and disadvantages of each alternative? Be sure to consider who gains and who loses by each alternative. (Minimum wages affect labor markets only when the mandated minimum wage is above the equilibrium wage. When the minimum wage is above the equilibrium wage, more people will want to work, and employers will want to hire fewer workers. This causes unemployment. You can illustrate this with a supply and demand graph. Under these circumstances, teenage unemployment increases the most because employers prefer more skilled adult labor to less skilled teen labor when the price of each is the same or the price differential between the two types of labor is small. In general the minimum wage tends to make the broad social goal of full employment more difficult to meet. According to those who support it, the minimum wage reduces freedom but promotes fairness and equity.)

6 Would you vote to raise the minimum wage? (Encourage students to use economic analysis in their answers and to consider the trade-offs among the broad social goals.)

Handout 9-4

1 What is the issue? (The issue is whether the voters should pass a rent control measure that will freeze rents at the level of two years ago.)

2 Draw a supply and demand graph that illustrates the situation when rent control is involved. Does the situation involve a price floor, a price ceiling, or neither? (A price ceiling.)

3 What broad social goals should you consider when you decide how to vote? (The broad social goals in this situation are economic equity and economic freedom.)

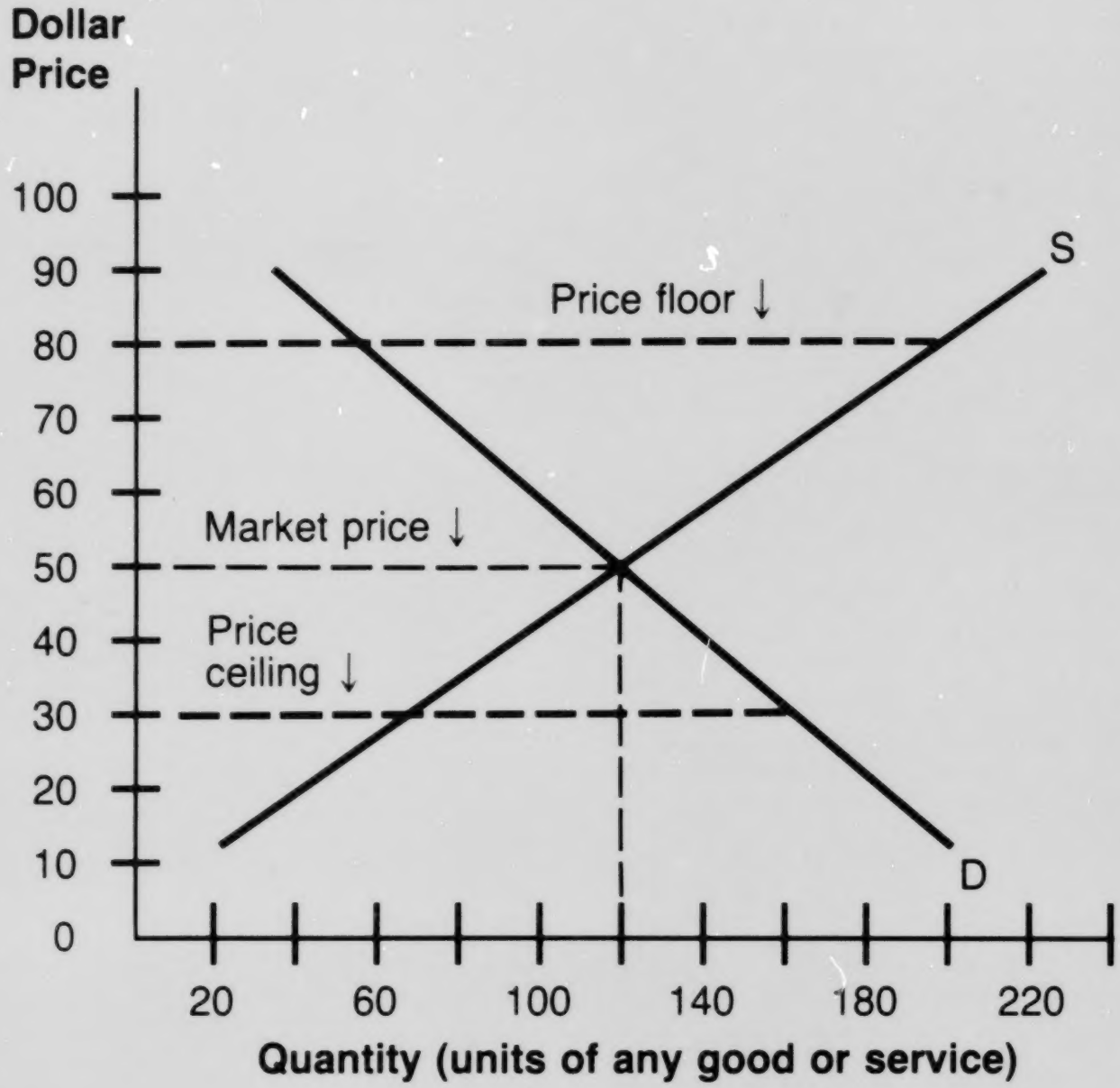
4 What are some alternative ways of achieving these goals? (The alternatives are to pass a rent control ordinance or to allow market forces to determine rents.)

5 What are the advantages and disadvantages of each alternative? Be sure to consider who gains and who loses with each alternative. (The argument for rent control is that it makes adequate housing more affordable for low-income people and thus promotes economic equity. Opponents argue that rent control causes housing shortages. Forcing rents below their equilibrium level increases demand for housing and reduces its supply: more people want to rent apartments and fewer apartments will be offered for rent. Opponents also argue that rent controls limit economic freedom. Finally, they claim that if the market doesn't ration housing, other rationing methods will appear: apartments will be divided up, extra fees charged, and maintenance deferred—thus controls act to limit economic equity.)

6 How would you vote on this issue? (Encourage students to support their opinions with economic analysis and to consider the trade-offs among the broad social goals.)

Visual 9-1

PRICE FLOORS AND CEILINGS



Handout 9-1

PRICE FLOORS AND CEILINGS

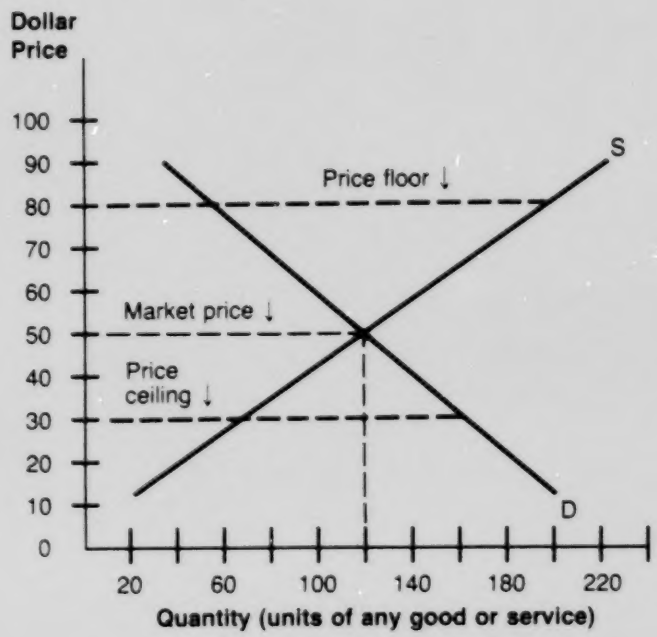
Name _____ Class _____

1 What is the market price?

2 What quantity is demanded and what quantity is supplied at the market price?
Quantity demanded _____
Quantity supplied _____

3 What quantity is demanded and what quantity is supplied if the government passes a law requiring the price to be $30?
Quantity demanded _____
Quantity supplied _____

4 What quantity would be demanded and what quantity would be supplied if the government passes a law requiring the price to be $80?
Quantity demanded _____
Quantity supplied _____



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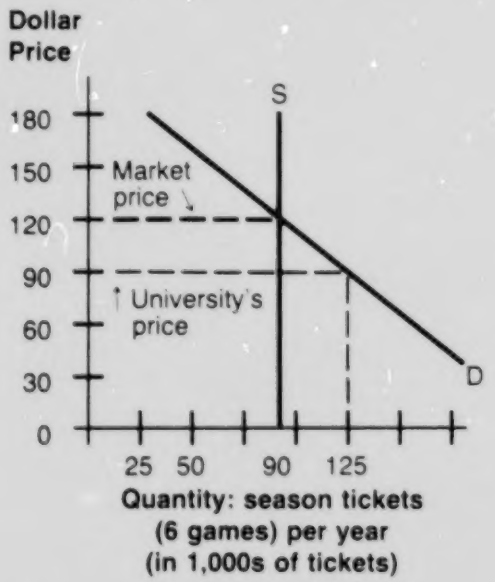
Handout 9-2

BIG FOOTBALL UNIVERSITY

Name _____ Class _____



Instructions: For these questions, assume the university has set the price of a season ticket at $90. It will take action against people who it discovers reselling tickets at a higher price, that is, it will try to prevent "black market" or "scalper" sales (sales above $90).

1 Answer these questions on the basis of the information in the graph:

- **a** Why is the supply curve a vertical line?
- **b** How many tickets are available at the university's price?
- **c** How many tickets do football fans wish to buy at the university's price?
- **d** What is the problem with respect to supply and demand?
- **e** Does the graph illustrate a price floor or a price ceiling?

2 What are some means of eliminating the shortage of tickets in order to prevent "black marketing" or "scalping"?

3 For each solution you put forward, answer the following questions:

- **a** Will the solution eliminate the shortage?
- **b** Is the solution fair?
- **c** Who benefits from the solution? Who loses?
- **d** What is the best solution?

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Handout 9-3

THE MINIMUM WAGE AND UNEMPLOYMENT

Name _____ Class _____

Imagine that you are a member of the U.S. House of Representatives. You must decide whether to vote yes or no on a bill that would raise the minimum wage. In committee hearings on the bill, you heard testimony from people who favor the increase and from people who are against it. For example, you heard one spokeswoman say:

"We're experiencing high inflation. The minimum wage must be raised accordingly. Otherwise, the working poor will receive wages that are miserably below what is needed to provide food, housing, and other necessities. Every worker has a right to earn a decent, living wage. The present minimum is too low and is therefore unjust and unfair."

You heard an opponent of the minimum wage state:

"The minimum wage should be allowed to expire. It creates unemployment, especially among disadvantaged minorities and teenagers. It creates incentives for businesses to substitute machines for people. People without jobs are worse off than people with low-paying jobs. This is particularly true for teenagers. Teenage unemployment is much higher than adult unemployment. One of the reasons is that the minimum wage reduces the number of jobs for teenagers with few skills, for at the minimum wage business would rather hire older people who are more skilled or who have more work experience. Such hiring decisions tend to discriminate against young blacks who, on the average, have less education and fewer skills than their white counterparts. Don't raise the minimum wage; eliminate it."

Questions:

1 What is the issue?

2 Draw a supply and demand graph that illustrates the issue. Does the issue involve a price floor, a price ceiling, or neither?

3 What broad social goals should you consider as you decide how to vote on this issue?

4 What are some alternative means of achieving these goals?

5 What are some advantages and disadvantages of each alternative? Be sure to consider who gains and who loses by each alternative.

6 Would you vote to raise the minimum wage? Why or why not?

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Handout 9-4

RENT CONTROLS AND AFFORDABLE HOUSING

Name _____ Class _____

Imagine that the voters in your city are going to vote on a law that would roll back all rents on houses and apartments to the levels of two years ago and would freeze rents at those levels. At the many towns meetings held on this proposal, citizens have argued furiously. Among the comments you heard were:

"Rents are too high for people on fixed incomes like my husband and me. With prices going up and up, our pension and social security checks just aren't enough. Everyone should have the right to decent housing. We have worked all our lives. Now all we ask is that rents be kept at an affordable level. That's the fair thing to do."

You also heard from the opposite side:

"Rent controls cause housing shortages. This lets rental property owners discriminate against any group they think is undesirable—families with children or pets, minorities, senior citizens. And the rent the owners get over a period of years won't be enough to properly maintain many older apartments. This will lead to blighted neighborhoods. If access to housing is the problem, raising the incomes of poor people is the answer, not rent controls."

Questions:

1 What is the issue?

2 Draw a supply and demand graph that illustrates the issue. Does the issue involve a price floor, a price ceiling, or neither?

3 What broad social goals should you consider as you decide how to vote on this issue?

4 What are some alternative means of achieving these goals?

5 What are some advantages and disadvantages of each alternative? Be sure to consider who gains and who loses by each alternative.

6 How would you vote on the issue? Why?

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Lesson 10

Responsiveness of Quantity Demanded to Price Changes

TIME REQUIRED Two class periods

CONCEPTS Demand
Ratios and percentages

INSTRUCTIONAL OBJECTIVES Students will

- Define price elasticity of demand;
- Distinguish between elastic and inelastic demand;
- Understand the factors that tend to make demand elastic or inelastic;
- Determine if a product has elastic or inelastic demand by observing how total revenue changes in response to changes in prices;
- Apply price elasticity of demand to economic problems.

RATIONALE Knowledge of price elasticity of demand helps students understand how businesses make pricing decisions and how governments make decisions on taxation. This lesson introduces students to elasticity, its calculation, and the factors that determine if demand for a product is elastic or inelastic.

MATERIALS

1 A copy of Handouts 10-1, 10-2, and 10-3 for each student

2 Calculators are helpful but not essential for completing Handout 10-2

PROCEDURE

1 Give a copy of Handout 10-1 to each student and have the students read everything in it except the problems.

2 Discuss price elasticity of demand by answering student questions on the reading. Be sure the students understand the definition of price elasticity of demand and the qualities that tend to make the demand for a product elastic or inelastic.

3 Have the students do the six problems in the handout.

4 Discuss the answers to the problems.

5 Give a copy of Handout 10-2 to each student. This handout helps students define elastic and inelastic demand more precisely.

6 Have the students read the directions in the handout, and then answer their questions. Be sure they understand that if demand is elastic, total revenue and price move in opposite directions. If demand is inelastic, total revenue and price move in the same direction. Go over problem 1 to make sure students know how to do the problems.

7 Have the students do the problems.

8 Discuss the answers to the problems.

9 Give a copy of Handout 10-3 to each student. Make sure the students understand the directions. They must determine which assumption about elasticity each story contains and whether the assumption is right or wrong.

10 Have the students complete the handout.

11 Discuss the answers to the handout. This presents a good opportunity to nail down the point that incorrect assumptions about elasticity of demand can lead to poor policy choices. A little knowledge about elasticity can also be dangerous. For example, people often perceive an inelastic demand schedule as "a lack of response" of the quantity demanded to a change in price rather than "a small response" of quantity demanded to a change in price. (A complete "lack of response" is rare.) Few economists were surprised that the large increase in gasoline prices beginning in 1973 reduced the quantity of gasoline demanded. Many elected officials and much of the public incorrectly assumed that because so many people depended heavily on gasoline, the quantity demanded would stay the same.

EVALUATION Assess the quality of student work on Handouts 10-1, 10-2, and 10-3. Assess the quality of student participation in the discussion based on Handout 10-3.

ANSWERS TO QUESTIONS IN HANDOUTS

Handout 10-1

Determine whether the demand for the following items is price elastic or inelastic. Write the reason for your answer.

1 *Salt*—Inelastic. It is a necessity, has few substitutes, and takes a small portion of a purchaser's budget.

2 *New cars*—Elastic. Used cars are a substitute, and a new car takes a large portion of a purchaser's budget. New cars may also be classified as a luxury.

3 *Pork chops*—Elastic. There are many substitutes, and meat takes a fairly large portion of a purchaser's food budget.

4 *European vacation trip*—Elastic. There are many other places to go to on vacation, and vacation travel is a luxury.

5 *Insulin*—Inelastic. Nothing could be more necessary for a diabetic.

6 *Insulin at one of four drug stores in a shopping mall*—More elastic. Competition provides substitute goods. That is one reason competition is so important—it keeps prices down.

Handout 10-2

2 **a** $10 \times 100 = 1{,}000$

b $9 \times 110 = 990$

c P↓ TR↓ inelastic

3 **a** $6 \times 60 = 360$

b $9 \times 50 = 450$

c P↑ TR↑ inelastic

4 **a** $6.50 \times 100 = 650$

b $6.00 \times 200 = 1{,}200$

c P↓ TR↑ elastic

5 **a** $4.00 \times 300 = 1{,}200$

b $3.75 \times 340 = 1{,}275$

c P↓ TR↑ elastic

6 Because the percentage change in quantity demanded is greater than the percentage change in price.

7 Because the percentage change in quantity demanded is less than the percentage change in price.

Handout 10-3

1 **a** I.M. is wrong.

b He assumes that demand for these products is elastic, but it is not. He therefore falsely concludes that raising taxes on cigarettes and liquor will curb their consumption a great deal. In fact, taxes on these commodities will curb their consumption very little.

2 **a** U.R. is wrong.

b There are lots of methods for saving gasoline, including using small cars, car pooling, and using public transportation. In fact, since the huge rises in the price of gasoline beginning in 1973, people have conserved on the use of gasoline, and sales of gasoline were lower than they would have been had gasoline prices not risen.

3 **a** Vic Acqua's assumption is wrong.

b Demand for water is inelastic, but raising its price will curb consumption some.

4 **a** Sky's assumption is wrong.

b He assumes that both business travelers and vacationers have an elastic demand for air travel. The fact is that the demand of business travelers is inelastic because they cannot postpone or give up their air travel. Vacationers can postpone their air travel, use other means of transportation, or change their destination so as not to require air travel or to require less of it.

Handout 10-1

WHAT IS PRICE ELASTICITY OF DEMAND?

Name _____ Class _____

You have learned that when price changes, the quantity demanded changes. An increase in price causes a decrease in the quantity demanded. A decrease in price causes an increase in the quantity demanded.

However, it's not enough to know that the quantity demanded rises or falls in response to price changes. It is also important to know by how much the quantity demanded changes. A business may decide not to increase the price of a product if people will buy *much less* of it at the higher price. Or, a business may decide to increase the price of a product if people will buy only a *little less* of it at the higher price.

How much the quantity demanded changes in response to price changes is called the **price elasticity of demand.** If the quantity demanded changes considerably, the good or service has an *elastic* demand. Elastic demand means the quantity demanded is very responsive to changes in price. If the quantity demanded changes little, the good or service has an *inelastic* demand. Inelastic demand means the quantity demanded responds relatively little to changes in price.

Several factors can determine if a product has an elastic or an inelastic demand schedule.

Necessities tend to have an inelastic demand. People find it hard to give up a necessity because they cannot readily buy less of it when its price rises. Luxuries tend to have an elastic demand. People can get along without them if the price becomes too high.

Products that have many substitutes tend to have an elastic demand because it is easy to buy a substitute if the price of one product in the group of substitutes rises too much. A product that has few substitutes tends to have an inelastic demand. Buyers don't have much choice if there are few substitutes, so they think twice before giving up such a product when its price rises.

Goods and services that take a large portion of a purchaser's budget tend to have an elastic demand schedule. Those that consume a small portion of a purchaser's budget tend to have an inelastic demand schedule.

INSTRUCTIONS: Determine whether the demand for the following items is price elastic or inelastic. Write your answer on the line after the item. Then write the reasons for your answer.

1 Salt _____ Why? _____

2 New cars _____ Why? _____

3 Pork chops _____ Why? _____

4 European vacation trip _____ Why? _____

5 Insulin _____ Why? _____

6 Insulin at one of four drug stores in a shopping mall _____ Why? _____

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Handout 10-2

ELASTICITY OF DEMAND AND CHANGES IN TOTAL REVENUE

Name _____ Class _____

What exactly do we mean by "a considerable change" and "a little change" in the quantity demanded? One way to define elasticity of demand more precisely is to examine what happens to *total revenue* when a price changes. Total revenue is price times quantity demanded.

Price × quantity demanded = total revenue
$10 × 150 items = $1,500

What happens to total revenue depends on the *relative* size of the changes in price and the quantity demanded. If the percentage change in the quantity demanded is greater than the percentage change in price, total revenue and the price change will move in opposite directions. This situation indicates that the demand schedule that lies between the two prices is elastic. If the percentage change in quantity demanded is less than the percentage change in price, total revenue and the price change will move in the same direction. This situation indicates that the demand schedule that lies between these two prices is inelastic. Let's summarize these points:

Price ↑ Total revenue ↓ =
Price ↓ Total revenue ↑ = } **Elastic demand**

Price ↑ Total revenue ↑ =
Price ↓ Total revenue ↓ = } **Inelastic demand**

Instructions: Now let's do some problems to drive home the point. For each problem, complete the math and circle the correct answer. Then write whether the product has an elastic or inelastic demand schedule between these two prices. The first problem is completed for you.

1 *Price rises from $5 to $6.* Quantity demanded decreases from 15 to 10.

a Old price × quantity demanded = old total revenue
5 15 75

b New price × quantity demanded = new total revenue
6 10 60

c P ↓ (↑) TR (↓) ↑ elastic

2 *Price falls from $10 to $9.* Quantity demanded increases from 100 to 110.

a Old price × quantity demanded = old total revenue
_____ _____ _____

b New price × quantity demanded = new total revenue
_____ _____ _____

c P ↓ ↑ TR ↓ ↑ _____

3 *Price rises from $6 to $9.* Quantity demanded decreases from 60 to 50.

a Old price × quantity demanded = old total revenue
_____ _____ _____

b New price × quantity demanded = new total revenue
_____ _____ _____

c P ↓ ↑ TR ↓ ↑ _____

4 *Price falls from $6.50 to $6.00.* Quantity demanded increases from 100 to 200.

a Old price × quantity demanded = old total revenue
_____ _____ _____

b New price × quantity demanded = new total revenue
_____ _____ _____

c P ↓ ↑ TR ↓ ↑ _____

5 *Price falls from $4.00 to $3.75.* Quantity demanded increases from 300 to 340.

a Old price × quantity demanded = old total revenue
_____ _____ _____

b New price × quantity demanded = new total revenue
_____ _____ _____

c P ↓ ↑ TR ↓ ↑ _____

6 Why do price and total revenue go in opposite directions when the demand for the good is elastic?

7 Why do price and total revenue go in the same direction when the demand for the product is inelastic?

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Handout 10-3

APPLYING ELASTICITY TO THE REAL WORLD

Name _____ Class _____

INSTRUCTIONS: Each of the following stories contains an assumption about elasticity of demand. For each story:

a State whether the assumption made about the elasticity of demand is correct or is wrong.

b Justify your answer.

1 I. M. Politico, a candidate for the state legislature, is proposing a large increase in the tax on cigarettes and liquor. He says, "I'm not proposing these taxes to raise revenue but to discourage reckless drinking and the filthy smoking habit. If the prices of cigarettes and booze go up, most people will quite using them. After all, no one needs to drink or smoke."

2 U. R. Kool, a candidate for Congress, proposes freezing the price of gasoline. "There is no substitute for gasoline," he says. "People have to get from one place to another. Economists who say higher prices will discourage people from buying as much gas as before don't live in the real world."

3 Councilman Vic Acqua opposed a price increase for water during a recent drought. He claimed that there is no substitute for water, and that therefore the demand for water is inelastic. He believes an increase in the price of water (water taxes) will result in the same quantity of water used as before the price went up.

4 Sky King, world traveler, says if the airlines want to attract more passengers, they should lower fares for business travelers as well as for vacationers. Both groups should respond equally to a price decrease.

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Lesson 11

Third-Party Costs and Benefits

TIME REQUIRED Two class periods

CONCEPTS Market failures
Externalities
Public goods
Markets and prices
Supply and demand

INSTRUCTIONAL OBJECTIVES Students will

- Define and give examples of third-party costs and benefits;
- Explain how private market activities can cause third-party costs and benefits;
- Explain why third-party costs and benefits result in overproduction or underproduction of goods and services;
- Analyze the effectiveness of government policies designed to remedy problems caused by third-party costs and benefits.

RATIONALE Some government intervention in the economy is designed to remedy problems arising from third-party costs and benefits of private activities or transactions. Students who understand third-party effects—often called externalities—can analyze the need for and effect of such government interventions.

MATERIALS

1 A copy of Handouts 11-1, 11-2, and 11-3 for each student.

2 OPTIONAL: Transparencies of the supply and demand curves used for Procedure 3.

PROCEDURE

1 Distribute Handout 11-1 to the students and have them read it.

2 Answer questions about the handout. The reading concerns the external effects of production; you may also want to bring up additional examples of external costs and benefits. In your explanations, you might emphasize the external effects of consumption, to help students comprehend that consumers as well as producers are involved in the process of imposing external costs or benefits. Some examples follow.

- Smoking creates external costs. The smoker is satisfied and the tobacco company gains, but third parties often have to put up with the resulting smell and litter as well as the hazard to health from breathing air containing cigarette smoke.
- People who drive under the influence of alcohol are much more likely to cause accidents than do other drivers. These accidents cause third parties to suffer personal injury and/or property damage.
- The productive work of maintaining one's house is an example of an external benefit provided by a consumer who also acts as a producer. If people landscape their yards, paint and otherwise maintain their houses, the whole neighborhood looks better. The houses are then usually worth more than houses in comparable neighborhoods in which the owners do not maintain their houses to an equal extent.
- Education provides third-party benefits. On the whole people's productivity increases with their level of education. A higher level of education also tends to be correlated with better health and a lower crime rate. Third parties benefit from this greater productivity, the fewer calls on health care services, and the lower burden on the police and the judiciary.

- If you teach in a public school, ask the students why the taxpayers should pay for their education. One reason is the third-party benefits created by education.

3 Distribute Handout 11-2 to the students. In Question 3, they must use supply and demand curves to analyze third-party effects. Before they do the handout, explain how supply and demand curves apply to externalities.

- Chart 1 shows market equilibrium with no third-party effects. The equilibrium price and quantity result in an efficient allocation of resources.

- In Chart 2, there are third-party costs. S is the supply curve when these costs are paid by the community. It is the same as S above. S_1 shows the supply curve if producers were forced to pay the third-party costs. That is, supply decreases. Notice that when the community pays the third-party costs, the producer's price is lower and production is higher than when the producer pays all the costs.

- In Chart 3, D represents market demand for a product. D_1 represents demand for the product if all spillover benefits are included in the transaction, i.e., if the buyers received all of the benefits. The market equilibrium amount, Q, is less than the optimal amount. Suppose that D represents private demand for immunization shots against a highly contagious disease. The social benefits of containing the disease or eradicating it are not included in the market decision. If they were, the demand curve would be at D_1. Notice that fewer shots are given with demand at D than at D_1. The optimal number of shots is at Q_1, where all the benefits are included as a part of demand. One manner of reaching Q_1 is to reduce the cost of the shots (e.g., by a government subsidy to those who administer the shots). Then supply rises to S_1, and society will receive the optimal amount of the product.

4 Have students answer the questions on the handout.

5 Discuss the answers.

EVALUATION Use Handout 11-3 as a test.

See Answers to Questions in Handouts on following page

CHART 1

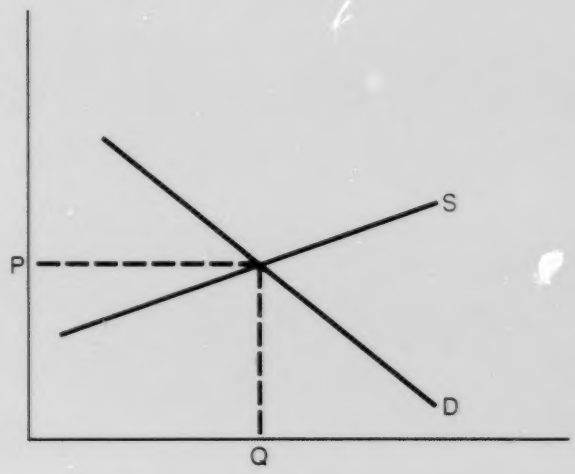


CHART 2

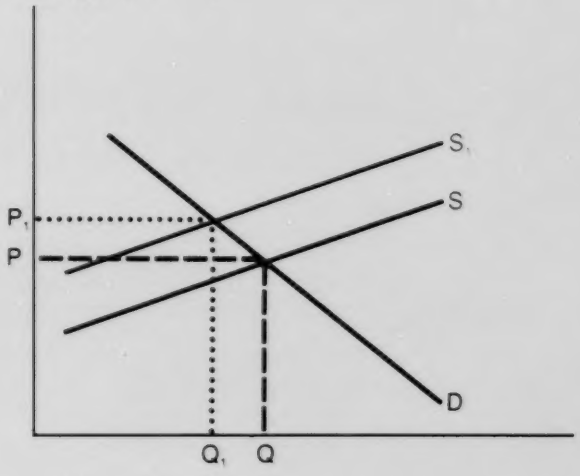
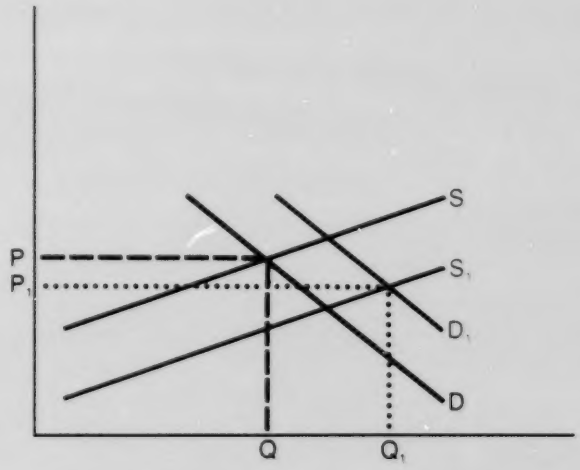


CHART 3



ANSWERS TO QUESTIONS IN HANDOUTS

Handout 11-2

1 Define negative externality or third-party cost. (Part of the cost of a transaction or activity is borne by third parties, i.e., people not directly involved in the transaction.)

2 Give three examples of third-party costs.

a Pollution

b Harmful effects of pesticides

c Failure to maintain a home and the land belonging to it, which reduces value of adjoining property

d Smoking

e Drinking while driving

f Many others

3 (Show correctly drawn diagram.)

4 Would more or less steel be produced according to new supply curve? (Less.)

5 Would the price be higher or lower? (Higher.)

6 Why are products that entail third-party costs "overproduced"? (Because the third-party costs are shifted to the community, supply is greater and prices are therefore lower than if all costs were borne by those involved in the transaction.)

1 Define positive externality or third-party benefit. (Part of the benefits of a transaction or activity is received by third parties, i.e., people not directly involved in the transaction.)

2 Give three examples of third-party benefits.

a Education

b Vaccination against disease

c Creating a park out of property that was previously a junkyard and thus improving the neighborhood for all

d Repairing a dilapidated house which results in increasing the value of adjoining property

e Installing lighting in the front yard of a house

f Many others

3 (Show correctly drawn diagram.)

4 Would more or less education be available according to new supply curve? (More.)

5 Would the price be higher or lower? (Lower.)

6 Why are products that yield third-party benefits "underproduced"? (Because buyers demand less than they otherwise would if they were receiving all of the benefits of consumption. Thus, demand is lower and the quantity supplied is lower.)

Handout 11-3

1 *Proposal 1* places the entire burden of pollution control on the downstream residents. Yet the firm's pollution is interfering with the downstream residents' property rights. It is not fair that these residents should pay this cost.

Proposal 2 is naive. Closing the plant may stop the pollution, but it will also cost jobs and hurt the firm's customers. Too much of the product may be produced in an unregulated market, but that does not mean that none should be produced.

Proposal 3 makes the most sense. The effluent tax forces both the business and its customers to share the cost of the pollution. The tax will increase production costs and price and cause less of the product to be produced. The economy will no longer be overproducing the product.

2 Without more information any of the following answers is justifiable.

Proposal 1: There are no substantial external benefits. This is mainly a private transaction. Let those who want to see baseball pay for the stadium as part of the cost of the tickets.

Proposal 2: The market for baseball games will impose external costs on residents in the stadium area and others who wish to drive and park in the area. Tax ticket sales to force the team and fans to bear part of the external costs and reduce "overproduction" of baseball.

Proposal 3: There are significant external benefits. Without subsidization of baseball, baseball will be "underproduced." Therefore, the residents should pay for some of the benefits through higher taxes.

Handout 11-1

THIRD-PARTY COSTS AND BENEFITS

Name _____ Class _____

Third-party costs and benefits—or externalities—are the effects of production or consumption of a good or service on people (the third parties) who are not involved in the transaction.

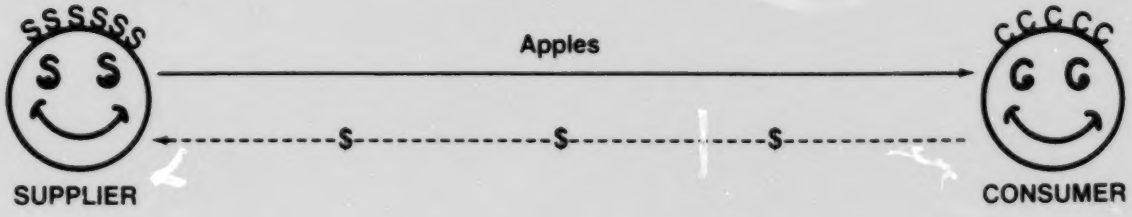
To understand externalities, let's first look at a transaction that has none. Figure 1 shows the market interaction between a supplier and a consumer of a good. Let's say they are producing and consuming organically grown apples. The supplier is one of several producers of apples, and the consumer is one of many consumers of apples. In the transaction, our apple eater receives the apples and in turn pays the farmer, as indicated by the lines. The supplier has absorbed many costs of production but is satisfied with the transaction because of the payment received from the consumer. The consumer is happy with the transaction because of the benefit derived from eating the apples. In such transactions, the producers and consumers bear all the costs and benefits. Suppliers pay all costs of production; no one else bears any costs or receives any benefits from engaging in production. Consumers receive the benefit of consumption; their consumption brings no costs or benefits to others.

Organically grown apples are used in the transaction described above because real-world examples of products free from external benefits and costs are hard to find. If the apple farmer had used fertilizer and pesticide, many other people might have been affected. What might some of these effects have been?

External costs and external benefits are directly opposite to each other. If the external effect is negative, it is called a negative externality or an external cost. If the external effect is beneficial, it is called a positive externality or an external benefit.

Figure 1

Private Transaction of a Good



Continued

Adapted from an exercise developed by John Pisciotta, Stevens Professor of Private Enterprise, Baylor University, Waco, Texas

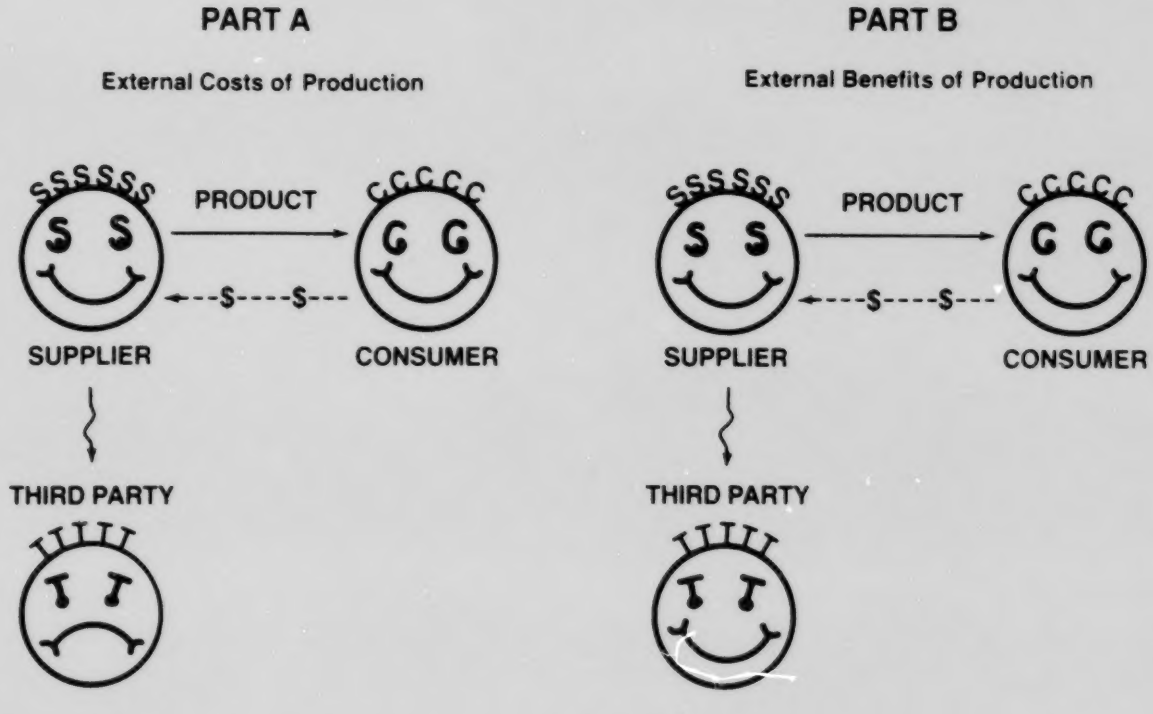
We'll use Happy Faces and Sad Faces to illustrate third-party costs and benefits. Each illustration in Figure 2 shows a supplier, a consumer, and a third party. The suppliers have *S*'s for hair, the consumers *C*'s, and the third parties *T*'s.

Part A depicts an external cost of production. The seller and consumer have happy faces. The consumer receives the product and pays the seller. Because this is a voluntary transaction, the consumer thinks the payment for the product is worthwhile. The seller also has a happy face since the payment provides an acceptable price for the product. However, Part A shows a third party who is sad because of a negative effect from production. An example of an external cost of production is pollution resulting from a manufacturing process. Let us suppose that in Part A the producer's operations pollute air or water and the producer does not prevent the pollution or clean it up afterward. Hence, the producer's price does not include the cost of dealing with the pollution. The consumer also benefits because if the producer's cost does not cover the cost of dealing with the pollution, the price to the consumer is lower than it otherwise would be. However, third parties who must now contend with dirtier air or more polluted water suffer increased costs such as health problems, reduced recreational opportunities, and higher taxes for water purification. Because the price of the product is lower than it would be if the producer paid all the costs of dealing with the pollution, the unregulated market economy will produce too much of the product. In general, because third-party costs are not reflected in the market prices paid by buyers, goods or services that result in external costs will be overproduced in an unregulated market.

Part B depicts an external benefit of production. The external benefit again comes from a market transaction, but this time it brings a happy face to the third party, for in this instance, third parties benefit even though they pay none of the costs of producing the product. An example is a dam built to generate electric

Figure 2

External Benefits and Costs



power. Among the third-party benefits might be flood control for downstream residents and a lake for recreation. People whose homes are no longer subject to floods or who fish, swim, and go boating in the lake would also benefit from the dam. However, in the absence of a subsidy or other nonmarket means of reducing producer costs, goods with external benefits tend to be underproduced in an unregulated market. Thus, if the dam must be paid for from electricity charges only, it might not be built, because the electricity charge alone may not be sufficient to permit the dam to operate at a profit.

Because an unregulated market overproduces products with external costs and underproduces products with external benefits, government may intervene to correct these situations. For instance, the government sometimes takes action designed to raise the price of products that impose external costs. It can require firms to meet certain pollution standards. This increases costs of production, decreases supply, and raises the equilibrium price. Less of the product will be produced than in an unregulated market. There also will be less pollution.

The government sometimes subsidizes the production of products with external benefits. If the government finances part of the cost of a hydroelectric dam, the dam may become practical to build. If the power company had to pay all the costs, it might not build the dam: consumer demand for a recreational lake is not reflected in the demand for electricity.

Private market decisions that are motivated by self-interest tend to ignore external costs and benefits. In those situations, a case may be made for government intervention.

Handout 11-2

EXTERNALITIES WORKSHEET

Name _____ Class _____

1 Define negative externality or third-party cost.

_____

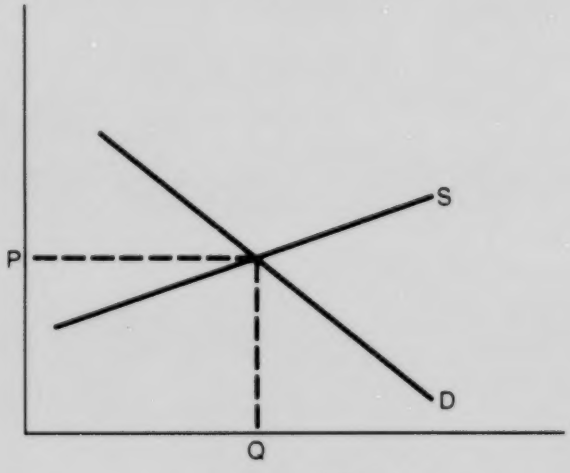
2 Give three examples of third-party costs.

a _____

b _____

c _____

3 In the supply and demand graph below, only the private costs and benefits have been accounted for. Draw the new supply curve, and show the new equilibrium price and quantity for steel if the external costs of pollution were also counted as costs of production.



TONS OF STEEL

4 Would more or less steel be produced according to the new supply curve?_____

5 Would the price be higher or lower?_____

6 Why are products that entail third-party costs "overproduced"? _____

_____

_____

_____

1 Define positive externality or third-party benefit.

_____

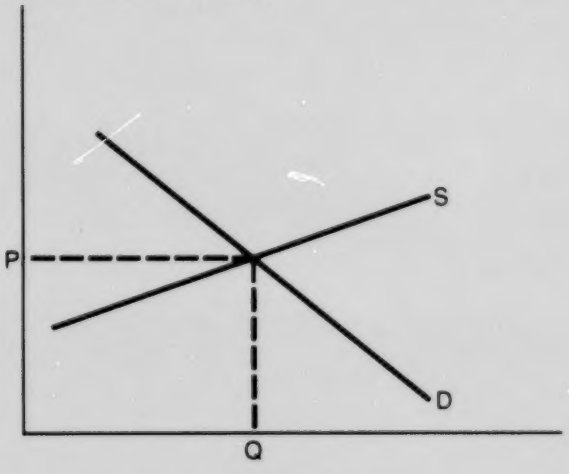
2 Give three examples of third-party benefits.

a _____

b _____

c _____

3 In the supply and demand graph below, only the private costs and benefits have been accounted for. Change the graph to show the new demand curve for education if all the third-party benefits to the community were counted as part of demand. Show the new equilibrium price and quantity.



EDUCATION

4 Would more or less education be available according to the new demand curves?_____

5 Would the price be higher or lower?_____

6 Why may products that yield third-party benefits be "underproduced"? _____

_____

_____

_____

From Master Curriculum Guide in Economics: Teaching Strategies for High School Economics Courses. 1985. Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016.

Handout 11-3

WHAT WOULD YOU DO?

Name _____ Class _____

1 A manufacturing plant pollutes a nearby river, much to the displeasure of the residents downstream. At a town meeting, residents discuss three proposals for solving the pollution problem. Pick the one you think is best and defend your answer.

Proposal 1 Since the downstream residents will receive the benefits of pollution control, they should pay for it. This is a clear case of external benefits or positive externalities. A property tax should be placed on the residents downstream.

Proposal 2 The government should force the plant to close. That is the only way to stop all the pollution. There is no reason for the downstream residents to suffer. Any other solution still leaves some dirty water.

Proposal 3 The company is not counting all of its costs of production. Keeping the river clean should be one of these costs. A tax, called an effluent tax, should be placed on the company for each cubic foot of polluted water.

2 The National League has awarded a new franchise for a baseball team to be established in Miami, Florida, but only if the new team, the Miami Oranges, has a major league stadium in which to play. Miami will have to build a new stadium if a team is to be awarded a franchise in that city. Proponents argue that the team will generate new business, provide jobs, increase tax revenues, and promote tourism in Miami because of the greater national exposure. Opponents argue that most of the money spent on baseball games will be by Miami-area residents, who will simply reduce their spending on other things. Thus, there will be few new jobs or tax revenues and few new tourists coming to Miami in the summer. Others say that the stadium, wherever it is located, will cause property values to go down and create traffic and parking problems and noise pollution. Voters have three proposals before them. Using your knowledge of externalities, write a paragraph in support of each proposal. What assumption concerning external costs and benefits does each proposal make?

Proposal 1 No city money should be used in the construction of the stadium.

Proposal 2 The city should place a tax on each ticket sold to pay for the stadium.

Proposal 3 The city should build the stadium and lease the right to play there to the baseball team at a subsidized rate.

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Lesson 12

When There Isn't Pure Competition

TIME REQUIRED Two class periods

CONCEPTS Competition and market structure
Monopoly
Oligopoly
Monopolistic competition
Market failures
The role of government

INSTRUCTIONAL OBJECTIVES Students will

- Recognize characteristics of different market structures;
- Name the type of market structure under which a firm operates;
- Analyze price-setting behavior of a monopoly;
- Evaluate different approaches to government policy regarding noncompetitive markets.

RATIONALE This lesson should help students understand different market structures and some of the arguments about government attempts to preserve competition. Because most actual markets do not fit the assumptions of the perfectly competitive market model, it is necessary to examine what happens when these assumptions, such as perfect information and an industry consisting of many small firms, are violated. Economists have developed classifications and market models to explain how other market structures, such as those characterized by monopoly, oligopoly, and monopolistic competition, can produce results that differ from those expected under purely competitive conditions.

MATERIALS A copy of Handouts 12-1, 12-2, 12-3, 12-4, and 12-5 for each student.

PROCEDURE

1 Distribute Handout 12-1 to the students, and have them look it over. Help them understand the difference among pure competition (called perfect competition in some textbooks), monopolistic competition, pure oligopoly, differentiated oligopoly, and monopoly. Ask questions such as these:

- What is the difference between homogeneous and differentiated products? (Homogeneous products are identical; differentiated products vary in quality and type. Raw cane sugar is homogeneous; candy bars are differentiated.)
- What is the difference between pure competition and monopolistic competition? (Under monopolistic competition, products are differentiated and competition takes place in terms of both price and quality. In pure competition, products are identical and market forces set the price.)
- Is monopolistic competition close to monopoly? (No, it is closer to pure competition because it has many firms.)
- What are the main characteristics of oligopoly? (Few firms, price leadership, barriers to entry.)
- What is the difference between pure oligopoly and differentiated oligopoly? (Pure oligopolists make identical products; differentiated oligopolists make products that compete against each other in terms of quality.)
- What are some examples of barriers to entry? (Large advertising costs, patents, licenses, high level of capital investment.)
- What is the distinguishing characteristic of monopoly? (Only one firm in an industry or in a particular geographical area or in a particular market in which other firms are unable to compete.)

2 Ask the students to fill in the last column of Handout 12-1 with examples of each market structure. Discuss their answers. Possible answers follow:

Pure competition: the wheat, corn, and other markets for agricultural products
Monopolistic competition: fast food, gasoline and other products sold at retail that carry brand names
Pure oligopoly: steel, aluminum
Differentiated oligopoly: breakfast cereal, beer, soft drinks, toothpaste, soap
Monopoly: electric utilities, gas utilities, local phone service

3 Give a copy of Handout 12-2 to each student. You can use this handout as a quiz or for a discussion. (Answers follow the Evaluation suggestions below.)

4 Give a copy of Handout 12-3 to each student. The purpose of the case study is to have students understand that many antitrust policy decisions are not clear-cut. Have the students read the case study and then write the answers to the seven questions. Discuss the answers with the students. Then ask some students for their recommendations on the case.

5 Give a copy of Handout 12-4 to each student. You can use this case study as a quiz, or you can use it as another part of step 4, above. (Students can work on Handouts 12-3 and 12-4 in small groups and make group recommendations.)

EVALUATION Give a copy of Handout 12-5 to each student. Students should write a brief essay stating their reaction as consumers to the congresswoman's speech.

ANSWERS TO QUESTIONS IN HANDOUTS

Handout 12-2

Suspect 1. Pure oligopoly: "oligopoly" because of price leadership and "pure" because Suspect 5 must be a differentiated oligopoly.

Suspect 2. Monopolistic competition: because the presence of a large number of sellers eliminates oligopoly and monopoly, and the need to advertise eliminates pure competition.

Suspect 3. Pure competition: the existence of many competitors eliminates monopoly; the lack of product differentiation eliminates monopolistic competition and differentiated oligopoly; and Suspect 1 accounts for the only other remaining possibility.

Suspect 4. Monopoly: the lack of homogeneous products eliminates pure competition and pure oligopoly, and the other two possibilities are accounted for by Suspects 2 and 5.

Suspect 5. Differentiated oligopoly: because of barriers to entry and product differentiation.

Handout 12-3

1 Differentiated oligopoly.

2 As more sales are concentrated among fewer firms, the remaining firms are tending to turn into oligopolies.

3 Advertising costs and brand recognition/loyalty.

4 More concentrated markets can lead to lower output, higher prices, and misallocated resources.

5 Promoting competition.

6 Answers will vary. Other goals to consider, for example, are economic security for the workers at the two breweries and economic freedom.

7 Answers will vary. One major point of difference among students may well concern whether they believe the two companies can survive without merging.

Handout 12-4

1 Will breaking up the monopoly produce lower prices and raise output? Are there economies of scale? What, if anything, prevents potential competitors from entering the market?

2 Do nothing. Lift the import ban. Break up AHTI.

3 Answers will vary but should include promoting competition and economic freedom.

4 Answers will vary.

Handout 12-5

From the consumer's point of view, the important factor is that mandating higher prices will not protect consumers. In fact, it limits price competition and hurts consumers. Protecting competitors does not necessarily preserve competition. The proposed legislation reduces competition, probably more effectively than the "big" companies could do by themselves. There may be a greater number of firms, but they won't be competing as much.

HANDOUT 12-1

Name _____ Class _____

Different Types of Market Structure

Market Structure	No. of Firms	Type of Product	Conditions of Entry	Type of Price-setting Behavior	Existence of Nonprice Competition	Examples
Pure (perfect) competition	Many	Homo-geneous	Free or very easy	Determined by market	None	
Monopolistic competition	Many	Differentiated	Relatively easy	Determined by market plus small amount of discretion	Some, especially by advertising	
Pure oligopoly	Few	Homo-geneous	Substantial barriers	Determined by market plus considerable discretion. Possible price leadership	Some, such as on-time delivery	
Differentiated oligopoly	Few	Differentiated	Substantial barriers	Determined by market plus considerable discretion. Possible price leadership	Extensive	
Monopoly	One	Only product of its kind available	Entry can be blocked	Establishes price at most profitable level possible	Advertising of firm's "image"	

From *Master Curriculum Guide in Economics: Teaching Strategies for High School Economics Courses*. 1985. Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016.

Handout 12-2

WHO'S THE MONOPOLIST?

Name _____ Class _____

Inspector Mark Etts is trying to find out which suspect is the monopolist. He knows that each represents a firm in a different market structure, but which is which? Use the quotations below, the information in Handout 12-1, and the process of elimination to help Inspector Etts specify the market structure for each suspect. (Each of the five market structures in Handout 12-1 is included and is used only once.)

Suspect 1 "Look, I'm not the monopolist. I've got plenty of competition. If I tried to raise my price, I'd lose business to Giant Industries. No, sir. I wait for them to raise prices, and I follow along behind."

Suspect 2 "I've got more problems than you have. New shops like mine are opening all the time. I have to spend money on advertising to convince people that my shop is unique and different."

Suspect 3 "I can't afford to advertise. It would eat up what little profit I make. Besides, what good would it do? My product is the same as everyone else's."

Suspect 4 "Well, my product is like no one else's. I work hard to make sure that my firm stays out front to avoid the perils of cutthroat competition. An orderly market and a fair price. That's our motto."

Suspect 5 "Good for you. But, Inspector, I'm not a monopolist. I know it's tough to break into our market, what with the huge advertising costs. Brand recognition is important. But I'm not guilty."

Suspect	Market Structure
1	_____
2	_____
3	_____
4	_____
5	_____

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Handout 12-3

THE BEER CASE

Name _____ Class _____

You have been hired as a consulting economist for the Antitrust Division of the U.S. Department of Justice. The following case is given to you for review. Use what you know about markets plus the information in the case to suggest a policy to the assistant attorney general in charge of your antitrust actions.

CASE

Facts: Regional Brewers, Inc., has announced plans to merge with Foamy, Inc., another brewer. The following table shows the leading brewers and their respective shares of total beer sales in the past year.

1. Muggs & Steins, Inc.	20%
2. Jones Breweries, Inc.	16%
3. Big Kegs, Inc.	10%
4. Schaatzer, Inc.	8%
5. Regional Brewers, Inc.	7%
6. Foamy, Inc.	5%
7. D.B. Bottlers	4%
8. Great Southern Brewery, Inc.	4%
9. All others	26%

The beer business has been getting more and more concentrated because smaller brewers have either been going out of business or have merged with larger brewers. Thus, the leading firms, especially the two largest, have been getting more and more of the beer business. The four largest brewers now account for 54% of sales; the eight largest for 74%.

Arguments: Some staff attorneys at Justice believe the merger should be opposed. They think a merger of the fifth and sixth largest brewers will continue what the attorneys regard as unhealthy trends toward bigger breweries, toward more concentration of sales among fewer firms, and, therefore, toward less competition. Large advertising campaigns by the biggest brewers are further increasing the difficulties of small brewers and raising barriers to the entry of potential competitors.

Attorneys for the companies involved have filed papers arguing that neither brewer can survive in the long run without the merger. The merger would create a new company with a larger advertising budget and with national brewing and marketing capability. They argue that if their companies fail, most of the sales they now account for will go to the top two companies and thus concentrate the market to an even greater extent. They argue that one strong competitor is better than two companies out of business.

Question: Should the Justice Department announce that it will oppose the merger? What is your recommendation and why?

You should consider the following questions in arriving at an answer:

1. What kind of market structure is present?
2. What trends are taking place in the beer business?
3. What barriers to entry are there, if any?
4. Why is the Department of Justice concerned with the trend in the beer market?
5. What goal does the Department of Justice seem most concerned with?
6. Are there any other goals that could also be considered?
7. How well do you think each of the alternatives meets the goals that you regard as the most important?

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Handout 12-4

THE MONOPOLY CASE

Name _____ Class _____

Amalgamated Hi-Tech Industries, Inc. (AHTI) became a monopoly in the market for on-board computers for speedboats when the last of its competitors folded a year ago. At present, all imports are banned. The assistant attorney general wants your opinion about whether the Justice Department should start a lawsuit to force AHTI to split into six separate competing companies.

BACKGROUND

Facts

AHTI, like all monopolists, is limiting its production to the most profitable level and therefore charging a higher price than it might be able to in a competitive market, given the prevailing demand schedule for the product. Its profits are not outrageously high per dollar invested compared to the national average for all industries. Estimates prepared by the department staff show that, under competitive conditions, consumers would buy 90,000 computers annually at a price of $142 each (for total sales of $12,780,000). AHTI is charging $177 and limiting production to 75,000 (for total sales of $13,275,000).

Arguments

Staff attorneys argue that consumers are being bilked because of AHTI's monopoly. Prices would be lower and output higher if AHTI were broken up into separate companies. By breaking up the monopoly, the resulting output and price should be closer to what would be the case under competitive conditions. The staff says that the monopoly distorts resource allocation and allows AHTI to be sloppy and inefficient.

The documents filed by AHTI's attorneys argue that since AHTI's present profits are not unusually high, higher output and lower prices would not allow for a reasonable profit. Furthermore, they say that breaking the company up will harm consumers, not help them. They point out that the Justice Department report assumes that each of the small companies could produce about as efficiently as one big company. They say this assumption is wrong: AHTI's size allows large-scale production which is more efficient than producing the same total amount at approximately six smaller factories. Thus, they argue, breaking up AHTI would cause a price increase, not a decrease. Finally, AHTI argues that if other producers can make a reasonable profit, they will enter the market and compete. Nobody is stopping them.

In your report to the assistant attorney general, what will you recommend and why?

Consider the following as you make your decision:

1 What are the key issues in this case?

2 What are some policy alternatives?

3 What are some important goals that can be used to evaluate the policy alternatives?

4 How well does each alternative meet these goals?

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Handout 12-5

CONSUMER PROTECTION?

Name _____ Class _____

Lately you have become interested in the problems and responsibilities of consumers. You have even joined a local consumers' rights activist organization. The representative from your congressional district is to speak before your group tonight, and you are to deliver a brief reaction to her speech. You have obtained a draft copy of her address so that you can prepare your remarks more thoroughly. A portion of her speech reads:

> ". . . and the recession drove many, many small businesses under. They had neither the size nor financial strength to compete with big companies during the recent hard times.
>
> "Now, I am worried about the effect the closing of these small businesses will have on consumers, particularly the closing of the retail establishments—the local grocery, clothing store, drug store, appliance store, and so on. I am concerned that with the loss of these businesses, big companies will have less competition and will be able to raise prices and gouge the consumer. Protecting consumers means protecting competition. And protecting competition means protecting competitors from the unfair advantages of large companies.
>
> "I am, therefore, introducing legislation to mandate minimum fair prices in certain retail industries. These minimum prices will ensure that large companies do not undercut the prices that small businesses can profitably offer. Competition will be preserved and consumers will benefit . . ."

How will you respond to this portion of the representative's speech? Write your reaction from the consumer's viewpoint, including whether you agree with her or not and why.

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Lesson 13

Until the Last Unit Equals . . .

TIME REQUIRED One class period

CONCEPTS Opportunity cost and trade-offs
Marginalism
Diminishing returns
Tables

INSTRUCTIONAL OBJECTIVES Students will

- Apply marginal analysis in economic decision-making;
- List several personal and government problems to which marginal analysis might be applicable;
- Explain and give examples of the law of diminishing returns.

RATIONALE Marginalism is an important concept useful in personal and social decision-making. Choices rarely are all-or-nothing propositions but usually concern incremental changes. Should a firm produce a few more or a few less units of output? Should a consumer buy a bit more of this and a bit less of that? Is the marginal or additional value produced by hiring more workers equal to or greater than the additional cost of hiring those workers? This lesson applies the concept of marginalism to several different situations.

MATERIALS

1 A copy of Handouts 13-1 and 13-2 for each student.

2 A transparency of the table in Handout 13-1.

3 An overhead projector.

PROCEDURE

1 Give a copy of Handout 13-1 to each student. Explain to the students that they will decide how many workers to hire to cut trees for a lumber company. Have them read the first page of the handout.

2 Project the transparency of the table in Handout 13-1. Explain the column headings and data, particularly how the numbers in the column labeled "Additional Trees Produced" are found. Say, for example, "The first worker cuts and loads 8 trees in a day, and the additional trees produced by the first worker compared with no workers at all is 8. Hiring a second worker brings the total number of trees cut and loaded to 18. Thus, the second worker accounts for the production of 10 more trees than when only one worker is used. So the additional product is 10, and so on."

3 Have the students complete the "Additional Trees Produced" column, and be sure they understand the idea. Some students might ask why the additional product increases first and then declines. Point out that at first having more workers increases efficiency as they help each other string lines, load trees, and do other tasks. At some point, there is not enough equipment or tasks to keep all workers busy all of the time. At that point, additional product begins to diminish; this is an example of "the law of diminishing returns" at work.

4 Divide the class into management teams of 4–5 students each. Ask each team to decide how many workers it will hire and to prepare a justification for its decision.

5 After allowing time for the students to reach decisions, ask each group to state its decision and give its justification. Some groups will probably select four workers because returns diminish beyond that point. Later they will see that this decision is wrong.

6 Tell the groups that you have additional information for them that might make them change their decisions. Have the students label column 4 (now blank): "Value of Additional Trees" and column 5 "Additional Labor Cost." Explain that each tree cut and loaded is worth $20. Thus, the "Value of Additional Trees" produced by the first worker is $160 ($20 × 8 = $160). The value of the second

"Until the Last Unit Equals..." was adapted from *Teaching Economics in One Semester*, a curriculum resource package developed by the North Carolina Council on Economic Education, Greensboro. We gratefully acknowledge the North Carolina Council's permission to use this activity.

worker's additional output is $200 ($20 × 10 = $200), and so on. Tell them that a worker gets $53 per day in wages and benefits. Therefore, the "Additional Labor Cost" of one worker is $53 a day compared with having no workers at all. The cost of the second worker is an additional $53, and so on. Have the class assist you in completing the table, and fill in the numbers on the transparency. The completed table follows the evaluation suggestions below.

7 Allow the groups time to decide how many workers to hire. Then ask each group for its new decision and justification. Students should decide on **9** workers. If not—let us assume the students' answer is 5—ask whether the additional value produced by the sixth worker exceeds the cost of hiring that worker. The seventh? The eighth? The tenth?

8 Point out the general rule that additional workers will be hired as long as the additional (marginal) value of the output of the last worker employed exceeds the additional (marginal) cost of hiring that worker.

9 Ask the students to arrive at new decisions given the following changes in conditions:

- The basic wage is increased. Workers now must receive $62 per day. (8 workers.)
- A new Lumber Workers Union negotiates an industrywide wage of $105 per day. (7 workers.)

EVALUATION

1 Give a copy of Handout 13-2 to each student. The students should use marginal analysis to choose the best option.

2 Ask the class to give examples of personal and government problems to which marginal analysis might be applied. List the examples on the chalkboard. Ask the class what kinds of data would be needed to decide how to solve these problems.

ANSWERS FOR QUESTIONS IN HANDOUTS

Handout 13-1

Tree Production

No. of Workers (1)	No. of Trees Cut & Loaded per Day (2)	No. of Additional Trees Produced per Day (3)	Value of Additional Trees Produced per Day (4)	Additional Labor Cost per Day (5)
1	8	8	$160	$53
2	18	10	200	53
3	40	22	440	53
4	89	49	980	53
5	130	41	820	53
6	150	20	400	53
7	159	9	180	53
8	164	5	100	53
9	167	3	60	53
10	169	2	40	53

Number of workers to hire: 9, because the additional cost of the tenth worker exceeds the additional value of what that worker produces.

Handout 13-2

Option 5 because the marginal cost of adopting option 6 is $12 million, which exceeds the benefits of $10 million.

Handout 13-1

TREE PRODUCTION WORKSHEET

Name _____ Class _____

The company you work for is heavily involved in harvesting trees for the production of lumber and paper products. The company has just obtained a lease on a large tract of land in a remote area of the state. Management has decided that it will be best to harvest these trees as quickly as possible since (1) work crews will have to be paid additional living expenses for working in this area and (2) replanting should be begun as early as possible to maximize profits. Cut and processed trees are to be stored nearby in a large area next to a railroad line, so storage and shipping are no problem. *You must determine how many workers should be employed to harvest the trees.*

Information:

1 You have a fixed amount of land available from which to cut trees—approximately 2500 acres.

2 You have a fixed amount of capital equipment assigned to this task—trucks, chain saws, skidders, etc., worth approximately $300,000.

3 Because of poor weather conditions, company policy forbids employees to work overtime.

TREE PRODUCTION

NO. OF WORKERS (1)	NO. OF TREES CUT & LOADED PER DAY (2)	NO. OF ADDITIONAL TREES PRODUCED PER DAY (3)	(4)	(5)
1	8	8	_____	_____
2	18	10	_____	_____
3	40	22	_____	_____
4	89	49	_____	_____
5	130	41	_____	_____
6	150	_____	_____	_____
7	159	_____	_____	_____
8	164	_____	_____	_____
9	167	_____	_____	_____
10	169	_____	_____	_____

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Handout 13-2

HOW MUCH GUNK SHOULD WE ACCEPT?

Name _____ Class _____

You are an economic adviser to the U.S. Environmental Protection Agency. You are in charge or recommending new "gunk control standards" (GCSs) for the smurf sticker industry. What set of standards (options) would you suggest, given the following facts? (You may select only one option.)

Fact 1: BAT (Best available technology) standards require the industry to use whatever control technology cleans up the most gunk (option 10).

Fact 2: Each successive alternative involves a tightening of standards to allow less gunk into the environment. For example, option 3 allows less gunk than option 2.

Fact 3: Technical studies by the National Academy of Sciences and the Environmental Protection Agency have generated the following data:

GCS Options	Estimated Health and Other Benefits (millions of $)	Estimated Cost of Industry Compliance (millions of $)
1	$ 10	$ 5
2	20	11
3	30	18
4	40	26
5	50	35
6	60	47
7	70	61
8	80	80
9	90	105
10 (BAT)	100	155

1 Which option would you recommend? Why?

2 Write a brief report justifying your decision.

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Lesson 14

Economic Ups and Downs

TIME REQUIRED One class period

CONCEPTS
Gross National Product
Unemployment rate
Inflation
Deflation
Tables
Charts and graphs
Percentage changes

INSTRUCTIONAL OBJECTIVES Students will

- Plot economic data on a graph;
- Analyze economic data for the trends they reveal;
- Classify a series of years as periods of recession or expansion;
- Define key indicators of economic performance (real Gross National Product, Consumer Price Index, unemployment rate).

RATIONALE News reports about the economy often refer to data concerning economic growth, recession, inflation, and unemployment. These are among the key indicators of economic performance that well-informed citizens should be familiar with. The ability to understand the meaning of such information is a necessary first step in judging the appropriateness of current economic policies.

MATERIALS

1 A copy of Handouts 14-1, 14-2, and 14-3 for each student.

2 A transparency of Handout 14-4.

3 An overhead projector.

4 The latest *Economic Report of the President* or other source(s) of economic data with which to update handouts.

PROCEDURE

1 Before the class meets, bring the data on Handout 14-1 up to date. (You can use the handout until the year 2001; there is ample room to extend it further as well.) The best source of recent data is the appendix in the *Economic Report of the President*, which is published every February; use the latest edition. (NOTE: Data on the real Gross National Product should be taken from one source, if possible, unless you can insert the revisions for the past three years that are made every July.)

2 Give a copy of Handout 14-1 to each student. Briefly explain the meaning of each indicator. (Lesson 15 deals with these indicators in more detail.)

3 Give a copy of Handouts 14-2 and 14-3 to each student. Explain that by graphing economic data, the class will be able to see important relationships among them.

4 Have the students graph the data as directed in items 1–3 of Handout 14-2. Because the rest of the lesson depends on accurate graphs, check the students' work. You may want to project one of the graphs drawn in class against Handout 14-4 so that students can check their work.

5 When students have finished the graphs, they should answer the questions in item 4 of the handout.

6 Project a transparency of Handout 14-4, and go over the answers to the questions in Handout 14-2. To nail down the main points, ask these questions:

- What are business cycles? (Business cycles are sequences of rises and falls in overall economic activity, particularly as registered in statistics on Gross National Product, the index of industrial production, employment, unemployment, and income. Business cycles typically consist of four phases: a period of **expansion** or rise in total economic activity; a **peak** or topping-out period; a **contraction** period, during which total economic activity declines; and a **trough** or bottoming-out period. The expansion then resumes, and the whole cycle of phases is repeated. These phases can be seen in the graph of real GNP, for example: 1970–73—expansion; 1973—peak; 1973–75—contraction; 1975—trough.)
- What happens to prices and unemployment during contraction or recession? (Prices tend to decline or their rise slows, although the effect is sometimes delayed. Unemployment rises.)

- What happens to prices and unemployment during expansion? (Prices tend to increase, although less during the early stages of a recovery than during the later stages. Unemployment declines.)

EVALUATION Assess the students' answers to the questions in Handout 14-2.

ANSWERS FOR HANDOUT 14-2 (Note that you will have to determine how the data you insert—that is, plot—for the years after this lesson has gone to press may add to or modify the answers. At the time this book was published, the dollar basis of real GNP was scheduled to be changed in late 1985 from 1972 dollars to 1982 dollars. When that happens, all the GNP data in Handout 14-1 should be replaced with the new series in 1982 dollars.

4 a Recessions occurred during 1973–75, 1979–80, and 1981–82.

b The unemployment rate rose.

c In the 1973–75 recession, the Consumer Price Index rose the first year and then declined. The rate of inflation increased in the 1979–80 recession but declined significantly after the recession ended. The rate of inflation declined during the 1981–82 recession.

d Periods of recovery include 1970–73, 1975–79, 1980–81, and 1982 at least through 1984.

e The longest recovery was from 1975 to 1979; 1980–81 was the shortest.

f The unemployment rate declines.

g The rate of inflation tends to increase more rapidly toward the end of expansion periods than at the beginning.

h The highest rate of inflation occurred in 1979–81.

i The lowest rates of inflation occurred during 1971–72 and 1983–84.

Handout 14-1

Name _____ Class _____

Measuring the Performance of the U.S. Economy

Year	Consumer Price Index (yr.-to-yr. percent change)	Unemployment Rate, All Civilian Workers (percent)	Real GNP (billions of 1972 dollars)
1970	5.9%	4.9%	$1,085.6
1971	4.3	5.9	1,122.4
1972	3.3	5.6	1,185.9
1973	6.2	4.9	1,254.3
1974	11.0	5.6	1,246.3
1975	9.1	8.5	1,231.6
1976	5.8	7.7	1,298.2
1977	6.5	7.1	1,369.7
1978	7.7	6.1	1,438.6
1979	11.3	5.8	1,479.4
1980	13.5	7.1	1,475.0
1981	10.4	7.6	1,512.2
1982	6.1	9.7	1,480.0
1983	3.2	9.6	1,534.7
1984	4.3	7.5	1,639.9
1985	_____	_____	_____
1986	_____	_____	_____
1987	_____	_____	_____
1988	_____	_____	_____
1989	_____	_____	_____
1990	_____	_____	_____
1991	_____	_____	_____
1992	_____	_____	_____
1993	_____	_____	_____
1994	_____	_____	_____
1995	_____	_____	_____
1996	_____	_____	_____
1997	_____	_____	_____
1998	_____	_____	_____
1999	_____	_____	_____
2000	_____	_____	_____
2001	_____	_____	_____

SOURCE: CPI and civilian unemployment, 1970–83, and real GNP, 1970–80: *Economic Report of the President,* February 1984 (Washington, D.C.: U.S. Government Printing Office, 1984), pp. 283, 259, and 222. CPI and civilian unemployment, 1984, and real GNP, 1981–84: *Economic Indicators,* February 1985.

From *Master Curriculum Guide in Economics: Teaching Strategies for High School Economics Courses.* 1985. Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016

Handout 14-2

GRAPHING THE U.S. ECONOMY

Name _____ Class _____

Instructions: Study the economic data in Handout 14-1. Use the data described in items 1–3 below to draw graphs in the appropriate portion of Handout 14-3. Then interpret the resulting graphs by answering the questions in item 4, below.

1 Plot Real Gross National Product on the top graph. Real Gross National Product measures the output of final goods and services in the economy in constant dollars (i.e., with any effects of inflation or deflation eliminated). In general, increases in Real Gross National Product are looked on as favorable developments, decreases as unfavorable.

2 Plot the annual percent change in the Consumer Price Index on the middle graph. The Consumer Price Index is the most widely known measure of changes in the average price level. A sustained rise in the level is called inflation; a sustained decline is called deflation. Both inflation and deflation are undesirable.

3 Plot the civilian unemployment rate on the bottom graph. The civilian unemployment rate indicates the percent of the civilian labor force that is out of work. In general, low unemployment rates are looked on as desirable; high rates as undesirable.

4 Based on the graphs you have plotted, answer these questions:

a A recession is sometimes defined as a period when Real Gross National Product drops for six months or more. During which years did we have recessions?

b What happened to the unemployment rate during these recessions?

c What happened to the Consumer Price Index during and after these recessions?

d The Real Gross National Product increases during a period of economic expansion. During which years did the economy expand?

e Which was the longest period of economic expansion? Which was the shortest period of economic expansion?

f What happens to the unemployment rate during periods of economic expansion?

g What happens to the Consumer Price Index during economic expansion?

h When did the highest rate of inflation occur?

i When did the lowest rates of inflation occur?

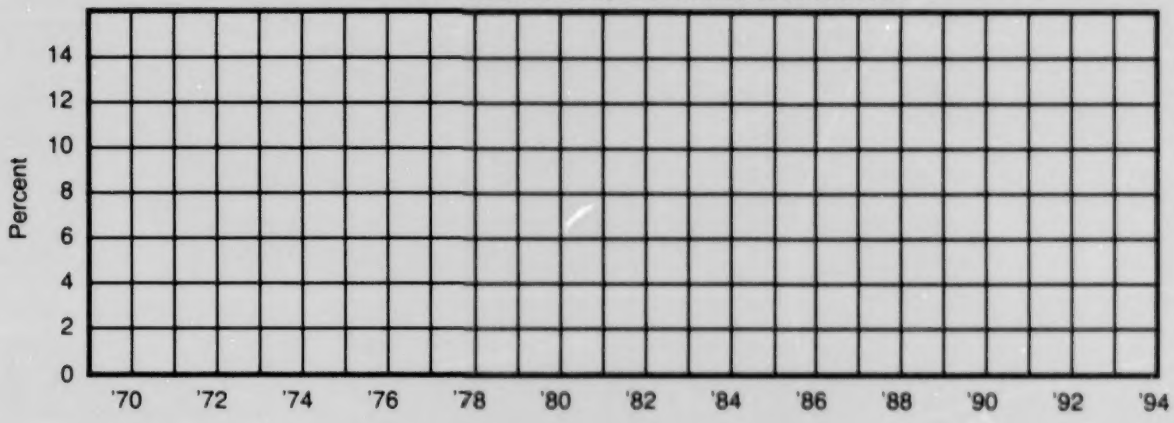
From *Master Curriculum Guide in Economics: Teaching Strategies for High School Economics Courses*. 1985. Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016.

Handout 14-3

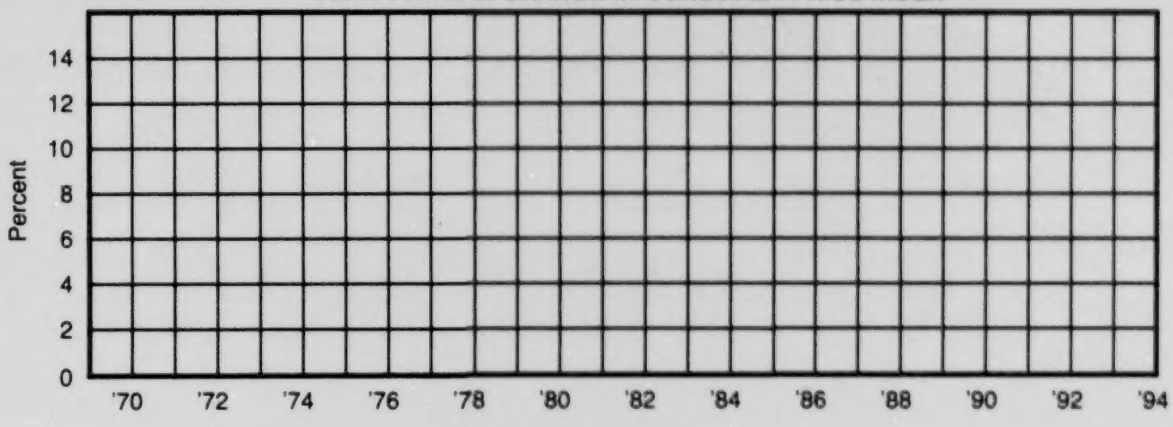
GRAPHING ECONOMIC DATA

Name _____ Class _____

UNEMPLOYMENT RATE, ALL CIVILIAN WORKERS



YEAR-TO-YEAR CHANGE IN CONSUMER PRICE INDEX



Continued

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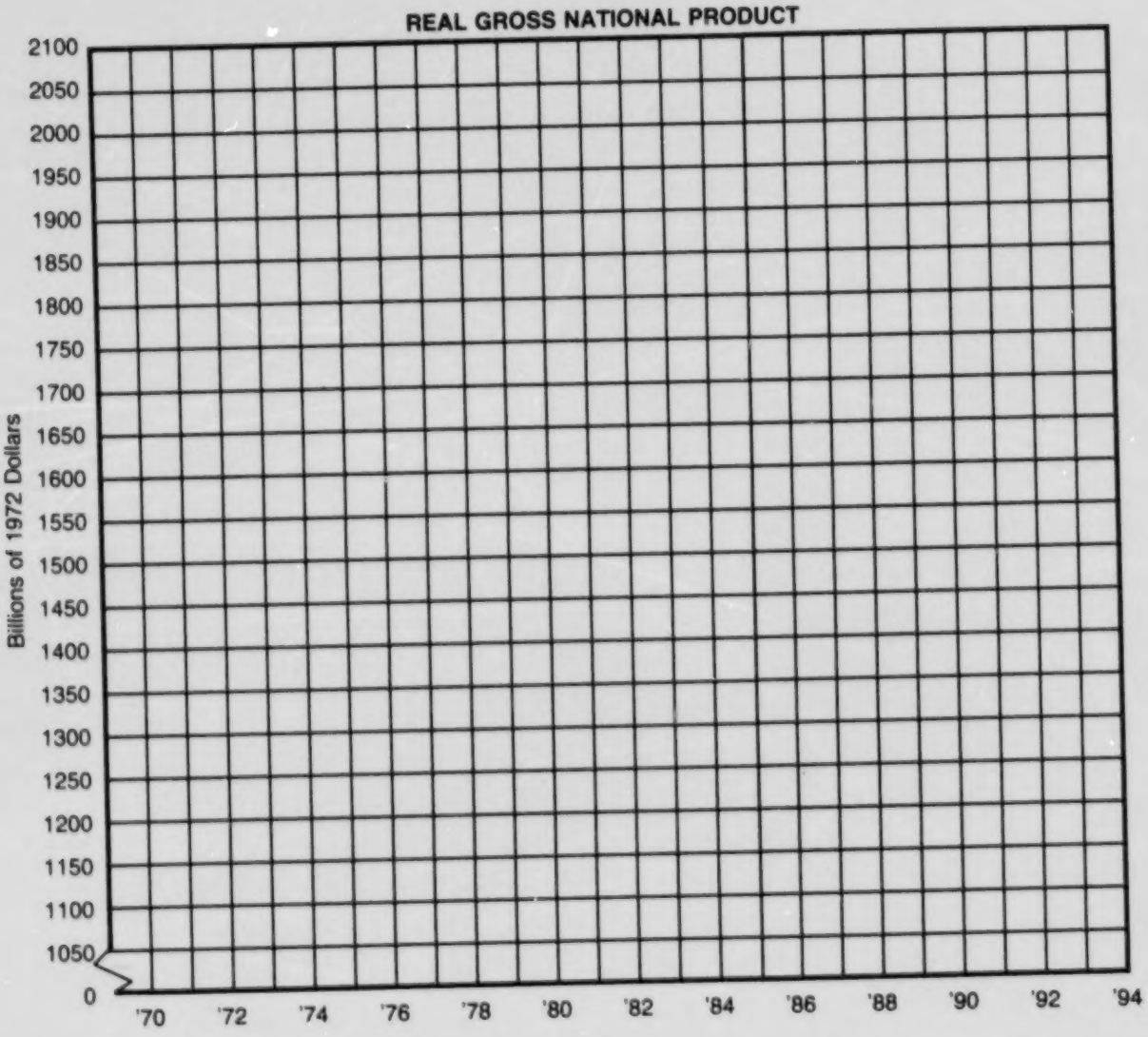
Handout 14-3 (concluded)

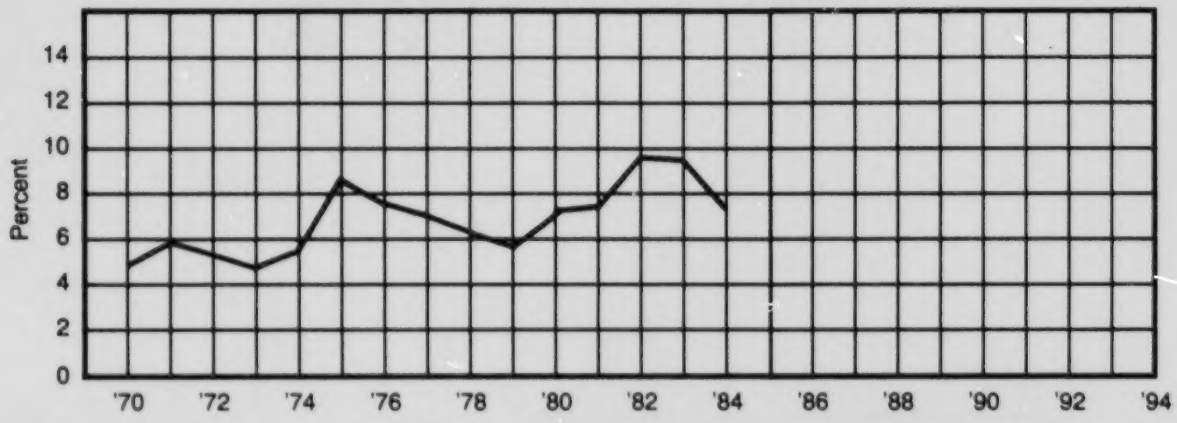


Handout 14-4

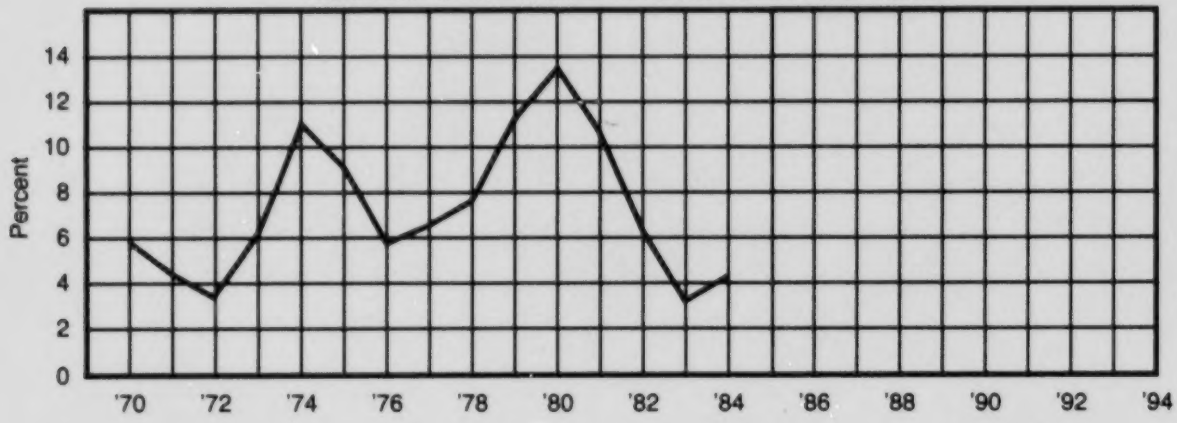
GRAPHING ECONOMIC DATA

Name _____ Class _____

UNEMPLOYMENT RATE, ALL CIVILIAN WORKERS

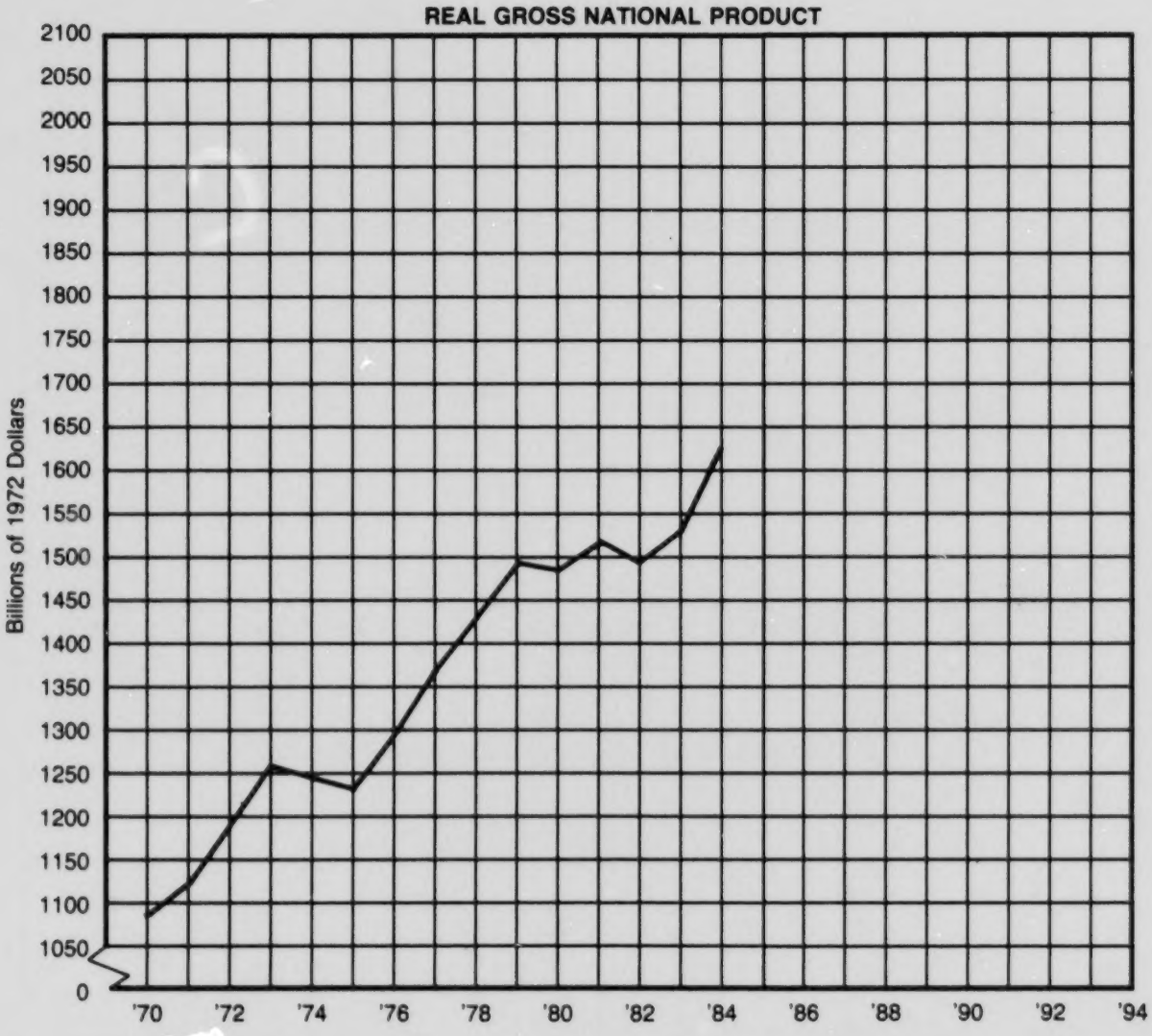


YEAR-TO-YEAR CHANGE IN CONSUMER PRICE INDEX



From *Master Curriculum Guide in Economics: Teaching Strategies for High School Economics Courses*. 1985. Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016.

Handout 14-4 (concluded)



Lesson 15

Economic Goals

TIME REQUIRED Two class periods

CONCEPTS
Broad social goals
Economic growth
Inflation
Deflation
Gross National Product
Unemployment
Real vs. nominal values
Index numbers
Consumer Price Index
Ratios and percentages

INSTRUCTIONAL OBJECTIVES Students will

- State the principal broad social goals of our economy;
- Define each goal;
- Explain how we measure whether the broad social goals are being achieved;
- Evaluate the performance of twentieth century U.S. Presidents in respect to economic growth, full employment, and price stability.

RATIONALE The Employment Act of 1946 and the Humphrey-Hawkins Act of 1978 commit the federal government to pursuing economic policies designed to promote high employment, price stability, and economic growth. Students should understand such broad social goals of the United States and how we typically measure their achievement.

MATERIALS

1 A copy of Handouts 15-1, 15-2, and 15-3 for each student.

2 OPTIONAL: A copy of the latest *Economic Report of the President*, in order to provide current data.

3 OPTIONAL: Calculators for students.

PROCEDURE

1 Distribute Handout 15-1 to the students. Explain to them that in this lesson they will look at three important economic goals that are included among the broad social goals of the United States—that is, goals that the majority of people support.

- Full employment
- Price stability.
- Economic growth.

Mention that there are other important economic goals such as protecting the environment, promoting an equitable distribution of income, and promoting economic freedom. Have students read the overview.

2 Measuring the Achievement of Social Goals

a Work through the Measuring Employment section with the students. Have them answer the questions at the end of that section before going on. Answers to the questions are:

Year	Civilian Labor Force	Civilian Unemployment Rate	Civilian Employment Rate
1950	62	4.8%	56.2%
1960	70	5.7	56.4
1970	83	4.8	57.7
1980	107	7.5	58.9

(1) Both the unemployment rate and the employment rate were higher in 1980 than in 1950 and 1960. Can you explain how such a result could occur? (It may seem paradoxical that the employment rate and the unemployment rate could both be higher. To understand how this could happen, calculate the percent increase in the numerators and the denominators of each equation shown earlier in the reading from 1950 (or 1960) to 1980. Since, for each equation, the numerators rose more than the denominators, both the employment rate and the unemployment rate rose. To understand *why* both rates went up, one must analyze the figures in more detail. In brief, the *employment rate* rose because many women entered the labor force and found jobs in great number. At the same time the men in the labor force found jobs harder to get. Since the women largely took jobs that were not typically held by males, the new women workers did not, in general, displace men. The *unemployment rate* went up (a) because employment in industries that chiefly employ

men—steel-making is a good example—declined, failed to increase, or increased very little and (b), because many teenagers entered the labor force and large numbers of them did not find jobs.)

(2) Do the data on the national unemployment rate given in the table above reflect the extent of unemployment among a particular group in our society, such as teenagers aged 16–19? (No, the national unemployment rate is the average unemployment rate for all persons in the labor force. The unemployment rate for specific groups may be much higher or lower. In 1980, for instance, the unemployment rate for all teenagers (16–19 years old) was 17.8 percent, for black male teenagers it was 34.4 percent, and for black female teenagers it was 36.5 percent. In the same year the unemployment rate for married men—black, white, and other—averaged 4.2 percent.)

b Read through the Measuring Price Changes section of Handout 15-1 and work out the examples in the text with your students. Then have the students do the problems at the end of the section. Answers to the problems are:

(1) $580 = (30 × $9) + (40 × $4) + (60 × $2.50)

(2) (580/480) × 100 = 1.208 × 100 = 120.8

(3) 120.8 − 100 = 20.8%

(4) (303.5 − 292.4)/292.4 × 100 = 0.038 × 100 = 3.8%

c Read through the section on Measuring Economic Growth in Handout 15-1 and work out the examples in the text with your students. Use the review questions at the end of the handout to evaluate the students' understanding of the topic. Answers follow:

(1) $5000 × (100/125) = $4000

(2) $6600 × (100/150) = $4400

(3) $4000/11 = $363.64

(4) $4400/12 = $366.67

(5) (4400 − 4000)/4000 × 100 = 0.1 × 100 = +10%

(6) (366.67 − 363.64)/363.64 × 100 = 0.0083 × 100 = +0.83%

3 Distribute Handouts 15-2 and 15-3. Review with students how the U.S. economy has performed in this century. Among the noteworthy matters to point out are the high unemployment in the 1930s and the fall in prices during the 1920s and 1930s, the rapid recovery and high rate of growth under wartime conditions during World War II, 1941–44, and the generally strong peacetime real GNP growth from 1949 through the mid-1960s, and the rather high unemployment rates and high inflation that began in the 1970s. You may wish to assign students the task of getting information on current trends in economic growth, unemployment, employment, and price changes in the U.S. economy. Answers to discussion questions in Handout 15-3 follow:

a During which Presidency was the rate of economic growth highest? (During the Roosevelt administration of 1940–44.) What brought this about? (World War II.) Can this high rate of economic growth be equated with a high level of well-being for citizens during this time? (No, because the rate of economic growth says nothing about the composition of output, and during the war, much of the growth in output was for arms and other war materiel.)

b What does a negative rate of change in real GNP mean? (It means that real output falls, that is, less goods and services were produced in a given year or period than in the previous year or period.) What period of time saw the greatest average annual drop in real GNP? (The Hoover administration of 1929–32, when the economy plunged into the Great Depression.) What happened to the employment rate and the unemployment rate when real GNP dropped in 1929–32? (The employment rate fell and the unemployment rate rose dramatically.) Can you explain why prices also dropped? (Prices dropped because with high unemployment, many people had no or little income. With incomes down, demand for most goods and services fell, and hence their prices went down.)

c Explain why, in the Roosevelt presidency of 1933–36, the growth of real GNP was very high and yet the average rate of unemployment was higher than at any other time in the 1900s. (Although the rate of growth of output was high, the actual level of production in the economy was still very low since the recovery during the Roosevelt presidency started from the depths of the depression. Economic growth is generally highest during periods of economic recovery because during these times production can be expanded quickly by hiring back workers and starting

idle machines rather than by buying new machines and training new workers.)

d Which periods of time in this century do you think were the soundest in terms of overall economic performance? (Answers will vary, but students should be looking for periods when the unemployment rate is low, inflation is low or nonexistent, and economic growth is high. Differences of opinion among students about the relative importance of unemployment, price trends, and economic growth should make for a good discussion.)

OPTIONAL: In the 1970s, a new indicator of overall economic performance called the "Misery Index" was created. The basic misery index adds the inflation rate to the unemployment rate. (A more complicated version subtracts from this total the rate of real growth of real GNP.) The lower the index, the better the performance of the economy. While the misery index is overly simplistic as a measure of economic performance, students may gain some additional insights into overall economic conditions by constructing a misery index for each presidential term, using the data in Handout 15-2. (NOTE: The misery index should be constructed using the absolute value of changes in the CPI, since falls in the general price level, which are generally accompanied by declines in economic activity and increases in unemployment, are no more desirable than rises in the general price level.)

e Before 1947, the employment rate, the unemployment rate, and related data based on the national survey of 60,000 households were computed using the population of persons aged 14 and over. Beginning in 1947, the ratio has been computed using the population of persons aged 16 and over. Why do you think this change was made? (In the first part of the twentieth century, it was very common for young people to start work as early as 14, and hence people were counted as part of the population of working age starting at that age. Subsequently, however, fewer and fewer young people left school to start work at such an early age, so it became less appropriate to treat people aged 14 and 15 as part of the working age population. The Fair Labor Standards Act of 1938 specified that children under age 14 could not be employed in businesses involved in interstate commerce, and the employment of people aged 14 to 16 was subjected to restrictive national regulations in situations where hazardous employment conditions existed. The act also specified the first minimum wage in U.S. history (25¢ per hour), and a penalty rate for overtime work (a workweek of more than 40 hours duration). By 1947, few 14–16-year-olds were looking for jobs or had jobs.)

f In looking at Handout 15-2, what relationship can you find between the rate of unemployment and the rate of price change? (Up until the 1970s, we can observe that prices rose slowly or even fell when unemployment was high, and that when unemployment was low prices tended to rise somewhat. The 1970s were marked by both high unemployment and large price rises—i.e., considerable inflation. Explanations as to why we had both high unemployment and inflation include the jumps in oil prices beginning in 1973, the rapid increase and changing composition of the labor force, increases in unemployment benefits, the time it takes people to react to unexpected changes in the economy, and a loss in market position by industries such as the steel and automobile industries, which faced competition from substitute materials and/or imports.)

g The United States entered World War I in 1917 and World War II in 1941. What impact did these two wars have on inflation in the United States? Why? (Prices increased during both wars as a result of the large amounts of money that were created to help finance the war effort and the diversion of production from goods for personal consumption to goods for military use. Prices increased much more rapidly during World War I than World War II because the economy was operating at high levels of output at the start of the U.S. involvement in World War I, while at the outbreak of World War II, the U.S. economy was still recovering from the Great Depression. Hence prices rose much less rapidly during World War II. During both world wars price controls were in effect on many items. During World War I the price controls came late and were not very effective, whereas in World War II price controls were established early and were more effective. Much of the inflation that would have occurred during World War II came during the Roosevelt-Truman presidency after the war ended, as controls were removed and prices shot up.)

EVALUATION Judge quality of responses to the questions in the handouts.

Handout 15-1

BROAD ECONOMIC GOALS

Name _____ Class _____

OVERVIEW

The 1930s were marked by periods of chronically high unemployment in the United States. After World War II, Congress passed the Employment Act of 1946, which stated that it was the continuing policy and responsibility of the federal government to use all practical means to promote maximum employment, production, and purchasing power. The Employment Act of 1946 established three important goals for the economy:

- **Full employment** (also called high employment) exists when most individuals who are willing to work at prevailing wages in the economy are employed. Even under conditions of full employment, there will be some temporary unemployment as workers change jobs and as new workers seek their first job.
- **Price stability** exists when the average level of prices in the economy is neither increasing nor decreasing. The goal of price stability does not imply that prices of individual items should not change but only that the average level of prices should not. Therefore, a condition of price stability usually means that some prices are rising, others are stable, and still others are falling. A sustained rise in the average level of prices is called **inflation;** a sustained decline is called **deflation.**
- **Economic growth** exists when the economy produces increasing amounts of goods and services over the long term. If the increase is greater than any increase in population, the amount of goods and services available per person will rise, and thus the nation's level of living will improve.

MEASURING THE ACHIEVEMENT OF ECONOMIC GOALS

In order to determine how well we are achieving the three economic goals listed above, we must measure changes in employment, prices, and economic growth. In this section we look at how such measurements are commonly made.

Measuring Employment

The national civilian unemployment rate and the national employment rate are the two most important means we use to measure how well we are achieving the goal of full employment. The unemployment rate is derived from a national survey of about 60,000 households conducted each month that asks about the employment status of people aged 16 or older. The number of people at work or looking for work can be estimated very accurately from the survey data. Those people who are at work (the employed) plus those people who are looking for work (the unemployed) make up the labor force. (The labor force is much smaller than the total population, since many individuals are too young or too old to work, some people are unable to work, and some choose not to work.) The percentage of the total labor force that is out of work is computed by dividing the number of people looking for work (the unemployed) by the total labor force and multiplying the result by 100, as follows:

$$\text{Unemployment rate} = \frac{\text{Unemployed}}{\text{Labor force}} \times 100$$

The employment rate is determined by taking the number of civilians 16 years of age and older—these data come from the monthly survey of 60,000 households—and dividing it by the number of persons 16 years of age and older in the noninstitutional population of the United States. (NOTE: The noninstitutional population includes all persons 16 years of age and older who are not inmates of penal or mental institutions, sanitariums, or homes for the aged, infirm, or needy, nor members of the armed forces stationed in the United States.)

$$\text{Employment rate} = \frac{\text{Employed persons, aged 16 and older}}{\text{Noninstitutional population, aged 16 and older}} \times 100$$

From *Master Curriculum Guide in Economics: Teaching Strategies for High School Economics Courses.* 1985. Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016

How well has the U.S. economy met the goal of full employment? Use the formulas just given to fill in the last three columns of Figure 15-1. (Answers for the year 1950 are given to guide you.)

(1) Both the unemployment rate and the employment rate were higher in 1980 than in 1950 and 1960. Can you explain how such a result could occur?

(2) Do the data on the national unemployment rate given in the table below reflect the extent of unemployment among a particular group in our society, such as teenagers aged 16–19?

Measuring Price Changes

Price indexes are used to measure price changes in the economy. By using a price index, one can "combine" the prices of a number of goods and/or services and express in one number the average change for all the prices. The Consumer Price Index or CPI is the measure of price change that is probably most familiar to most people. It measures changes in the prices of goods and services commonly bought by consumers. Items on which the average consumer spends a great deal of money—such as food—are given more weight (importance) in computing the index than items such as newspapers, magazines, and books, on which the average consumer spends comparatively less. The index itself is based on a market basket of approximately 400 goods and services. They are weighted according to how much the average consumer spent on these goods and services in a given—or "base"—year. Other price indexes used in the United States include (1) the Producer Price Index, which measures changes in the prices of consumer goods before they reach the retail level as well as the prices of supplies and equipment bought for use by businesses and (2) the GNP Deflator, which is the most inclusive index available since it takes into account all goods and services produced.

To construct any price index, some previous period, most usually one year, is selected as the base period. The prices of any subsequent period are expressed as a percent of the base period. For convenience the base period of any index and its components are practically always set at 100. For the Consumer Price Index, the formula used to measure price change from the base period is:

$$\text{Consumer Price Index} = \frac{\text{weighted cost of base-period items in current period}}{\text{weighted cost of base-period items in base period}} \times 100$$

We multiply by 100 to express the index in percent form, which also makes the answer easily comparable to the figure of 100 set for the base period. To keep things simple, let's say an average consumer in our economy buys only three things, as described in Figure 15-2.

Figure 15-1

YEAR	CIVILIAN NONINSTITUTIONAL POPULATION AGE 16 AND OVER	CIVILIAN LABOR FORCE				
		Employed	Unemployed	Total	Unemployment Rate	Employment Rate
	millions					
1950	105	59	3	62	4.8%	56.2%
1960	117	66	4			
1970	137	79	4			
1980	168	99	8			

Continued

Figure 15-2

	Quantity Bought in Base Year	Unit Price in Base Year	Unit Price in Year 1	Unit Price in Year 2
Whole pizza pie	30	$5.00 _____	$7.00 _____	$9.00 _____
Prerecorded audiocassette	40	$6.00 _____	$5.00 _____	$4.00 _____
6-pack of soft drinks	60	$1.50 _____	$2.00 _____	$2.50 _____
Total		_____	_____	_____

First compute the cost of buying all the items in the base year:

$(30 \times \$5 = \$150) + (40 \times \$6 = \$240) + (60 \times \$1.50 = \$90) = \$480$

To compute the Consumer Price Index for Year 1, find the cost of buying those same items in Year 1. Try this yourself. Your answer should be $530, i.e., the sum of $(30 \times \$7) + (40 \times \$5) + (60 \times \$2)$. The Consumer Price Index for Year 1 is then equal to ($530/$480) × 100, which equals 110.4. This means that what we could have bought for $100 in the base year costs $110.40 in Year 1. If we subtract the base year index of 100.0 from 110.4 we get the percentage change in prices from the base year. In this example prices rose 10.4 percent from the base year to Year 1. Remember that the weights used for the Consumer Price Index are determined by what consumers bought in the base year: in the example above we used base-year quantities to figure the expenditures in Year A as well as in the base year. The rate of change in this index is determined by looking at the percent change from one year to the next. If, for example, the Consumer Price Index were 150 in one year and 165 the next, then the percent change for that year would have been a price rise of 10 percent. This is computed by use of the following formula:

$$\text{Price change} = \frac{\text{Change in CPI}}{\text{Beginning CPI}} \times 100$$

$$= \frac{165 - 150}{150} \times 100 = 10\%$$

Now try these problems:

(1) What is the cost of buying the base-year items in Year 2 in the table above? _____

(2) What is the CPI for Year 2? _____

(3) What was the percentage increase in prices from the base year to Year 2? _____

(4) In December of 1982, the CPI was at 292.4, and in December of 1983, the CPI was at 305.5. What was the percentage change in prices for this twelve-month period? _____

MEASURING ECONOMIC GROWTH

To measure economic growth, we measure increases in the quantity of goods and services produced in the economy from one period of time to another. The **Gross National Product** or **GNP** is commonly used to measure economic growth. The GNP is the dollar value at market prices of all final goods and services produced in the economy during a stated period.

Final goods are goods intended for the final user. For example, gasoline is a final good but crude oil, from which gasoline and other products are derived, is not. Before using GNP to measure economic growth, we must first adjust GNP for any price changes that have occurred. Let's say GNP in Year 1 is $1,000 and in Year 2 it is $1,100. Does this mean the economy has grown 10% between Year 1 and Year 2? Not necessarily. If prices have risen, part of the increase in GNP in Year 2 will merely represent the increase in prices. We call GNP which has been adjusted for price changes **real** GNP; if it isn't adjusted for price changes, we call it **nominal** GNP. To compute real GNP in a given year, use the following formula:

$$\text{Real GNP in Year 1} = \text{Nominal GNP in Year 1} \times \frac{100}{\text{Price index in Year 1}}$$

To compute real economic growth in GNP from one year to another, subtract real GNP for Year 2 from real GNP in Year 1. Divide the answer (the change in real

GNP from the previous year) by real GNP in Year 1. The result, multiplied by 100, is the percent growth in real GNP from Year 1 to Year 2. (If real GNP declines from Year 1 to Year 2, the answer will be a negative percent.) Here's the formula:

$$\text{Economic growth rate} = \frac{\text{Real GNP in Year 2 minus Real GNP in Year 1}}{\text{Real GNP in Year 1}} \times 100$$

For example, if real GNP in Year 1 = $1,000 and in Year 2 = $1,028, then the economic growth rate from Year 1 to Year 2 equaled 2.8 percent: (1028 − 1000)/1000 = 0.028, which we multiply by 100 in order to express the result as a percent.

In measuring real GNP and economic growth, it is usual to look at real GNP per capita. To do so, we divide the GNP of any period by a country's average population during the same period. This procedure enables us to determine how much of the economic growth of a country simply went to supply the increase in population and how much of the growth represented improvements in the level of living of the entire population. In our example, let's say the population in Year 1 was 100 and in Year 2 it was 110. What was real GNP per capita in Years 1 and 2?

$$\text{Year 1 real GNP per capita} = \frac{\text{Year 1 real GNP}}{\text{Population in Year 1}} = \frac{1000}{100} = \$10$$

$$\text{Year 2 real GNP per capita} = \frac{1028}{110} = \$9.3$$

In this example, the average level of living fell even though economic growth was positive. Developing countries with positive economic growth but with high rates of population growth often experience this condition.

Now try these problems using the information below:

	Nominal GNP	Price Index	Population
Year 3	$5,500	125	11
Year 4	6,600	150	12

(1) What is real GNP for Year 3? _____

(2) What is real GNP for Year 4? _____

(3) What is real GNP per capita for Year 3? ____

(4) What is real GNP per capita for Year 4? ____

(5) What was the rate of real economic growth between Years 3 and 4? _____

(6) What was the rate of real economic growth per capita between Years 3 and 4? (Hint: Use per capita data in the economic growth rate formula.) _____

Handout 15-2

The Performance of the U.S. Economy, by Presidential Administration, 1901–84

		Average Annual Rate of Unemployment	Civilian Employment Rate[a]	Average Annual Percent Change in the CPI	Average Annual Percent Change in the Real GNP
1901–04	McKinley-Roosevelt	4.2%	52.2%	+2.0%	+4.0%
1905–08	Roosevelt	4.2	54.3	+1.8	+3.1
1909–12	Taft	5.6	54.0	+1.8	+6.9
1913–16	Wilson	6.4	53.1	+3.1	+0.9
1917–20	Wilson	3.2	52.9	+16.4	+1.3
1921–24	Harding-Coolidge	6.4	51.8	−4.8	+4.8
1925–28	Coolidge	3.1	53.2	−1.7	+3.7
1929–32	Hoover	12.8	47.6	−5.4	−6.4
1933–36	Roosevelt	20.9	43.7	+3.0	+7.7
1937–40	Roosevelt	16.3	46.5	−2.0	+4.3
1941–44	Roosevelt	4.4	51.5	+5.9	+12.4
1945–48	Roosevelt-Truman	3.4	53.2	+8.2	−2.5
1949–52	Truman	4.4	56.5	+3.0	+5.2
1953–56	Eisenhower	4.2	56.7	+0.8	+3.1
1957–60	Eisenhower	5.5	56.2	+2.2	+2.3
1961–64	Kennedy-Johnson	5.8	55.5	+1.2	+4.5
1965–68	Johnson	3.9	57.0	+2.9	+5.0
1967–72	Nixon	5.0	57.3	+4.7	+2.9
1973–76	Nixon-Ford	6.7	57.1	+8.0	+2.4
1977–80	Carter	6.5	59.1	+9.7	+3.3
1981–84	Reagan[b]	8.4	58.4	+5.3	+2.3
1901–84	Median, all administrations	5.5	54.0	+2.9	+3.3

SOURCE: U.S. Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1970* (Washington, D.C.: U.S. Government Printing Office, 1975), Series D1-15, D86, E135, F3; and Council of Economic Advisers, *Economic Report of the President* (Washington, D.C.: U.S. Government Printing Office, 1985) Tables B-2, B-32, B-33, B-54.

a. Data before 1947 are based on the population age 14 and over; data from 1947 on are based on the population age 16 and over.

b. Figures are preliminary.

From *Master Curriculum Guide in Economics: Teaching Strategies for High School Economics Courses*. 1985. Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016

Handout 15-3

QUESTIONS ON TWENTIETH CENTURY ECONOMIC PERFORMANCE

Name _____ Class _____

a During which Presidency was the rate of economic growth highest? What brought this about? Can this high rate of economic growth be equated with a high level of well-being for citizens during this time? _____

b What does a negative rate of change in real GNP mean? What period of time saw the greatest average annual drop in real GNP? What happened to the employment rate and the unemployment rate when real GNP dropped? Can you explain why prices also dropped? _____

c Explain why, in the Roosevelt presidency of 1933–36, the growth of real GNP was very high and yet the average rate of unemployment was higher than at any other time in the 1900s. _____

d Which periods of time in this century do you think were the soundest in terms of overall economic performance? _____

e Before 1947 the employment rate, the unemployment rate, and related data based on the national survey of 60,000 households were computed using the population of persons aged 14 and over. Beginning in 1947, the ratio has been computed using the population of persons aged 16 and over. Why do you think this change was made? _____

f In looking at Handout 15-2, what relationship can you find between the rate of unemployment and the rate of price change? _____

g The United States entered World War I in 1917 and World War II in 1941. What impact did these two wars have on inflation in the United States? Why? _____

From *Master Curriculum Guide in Economics: Teaching Strategies for High School Economics Courses*. 1985. Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016.

Lesson 16

The Trial of Ms. Ann Flation

TIME REQUIRED One class period

CONCEPTS Inflation
Income distribution
Monetary policy

INSTRUCTIONAL OBJECTIVES Students will

- State which groups in the population gain and which groups lose from unanticipated inflation;
- Recognize that unanticipated inflation hurts persons holding assets whose value or earnings do not rise as much as the rate of inflation;
- Explain why debtors gain and lenders lose from unanticipated inflation.

RATIONALE When a country experiences an unanticipated increase in the average level of prices, some people are hurt while others are helped. Because policies to slow or halt the rate of inflation may figure prominently as political issues, students should know who gains and who loses from inflation in order to evaluate the fairness or soundness of any policies that are proposed. As consumers, students should also know how they might protect themselves from the harmful consequences of inflation.

MATERIALS

1 A copy of Handout 16-1 for each student.

2 Five chairs to be positioned in front of the class, as described in Procedure 2.

PROCEDURE

1 Distribute Handout 16-1. Explain that the handout contains a 10-character playlet about those who lose and those who gain from unanticipated inflation. Select students to play the following roles:

Ms. Fix Ed Income	Ms. Ann Flation
Mr. Con Glomerate	Judge
Professor I. Can't Geta-head	Prosecuting attorney
	Defense attorney
Mr. I.O. "Manny" Bucks	Bailiff
Ms. Iona Lotts	

Ask the remainder of the class to serve as the jury.

2 Position five chairs at the front of the class. Three chairs should face the class, and two chairs should face the chalkboard. The chairs facing the chalkboard should be closer to the students. They are for the prosecuting attorney and defense attorney. The judge should be seated in the middlemost of the three chairs that face the class, and the bailiff and the witness who is testifying should occupy the other two.

3 Have the students act out "The Trial of Ms. Ann Flation" (Handout 16-1).

4 Afterward, discuss the play with the students in order to increase their understanding of who benefits and who loses from inflation. If you have not stressed the matter in Lessons 14 and 15, tell the students (and illustrate or explain as necessary) that inflation is a sustained rise in the average level of prices. Ask questions such as these:

- Assume the characters in the play were absolutely sure that the annual inflation rate would be 10 percent for the next twenty years. How would this information affect them? (They would be affected by actions taken to adjust to the anticipated general increase in the price level. For example, because lenders would raise their interest rates to reflect the anticipated rate of inflation, *I.O. "Manny" Bucks* wouldn't gain by purchasing on credit. *Con Glomerate* would set his prices and make investment plans on the basis of an anticipated annual inflation rate of 10 percent. *Professor I. Can't Get-ahead* would probably have an escalation clause in his contract so that his salary would rise in line with inflation, and everyone would expect college fees to also rise with the inflation rate. In general, both employees and employers would understand that wage increases of 10 percent per year are necessary for wages to keep up with prices. However, if inflation is not predictable or does not proceed at a steady rate but at a variable rate instead—i.e., it is unanticipated or not correctly anticipated, economic plans become difficult to make. Under these conditions, some people gain and some people lose from inflation.)
- Iona Lotts claims to have beaten inflation by purchasing real estate. Is this a sure way of beating inflation? (On the whole, people who purchased real estate in the 1960s and into the 1980s—i.e., up to the time this lesson was written—benefited, because, on the whole, real estate prices rose more than inflation. Moreover, almost all real estate is

purchased with borrowed money, and because lenders did not anticipate much inflation during the early portion of the period, borrowers were the beneficiaries of low fixed-interest-rate loans. The lenders who provided the money—again, especially during the early part of the period—lost, since they did not receive high enough interest rates to offset the decreasing purchasing power of the dollar because of inflation. Economists consider real assets, such as a residence, other real estate, precious metals, and factories to be inflation neutral if their prices rise as much as the average price level does. In that case, owners of real assets are neither helped nor hurt by inflation. If the price of any real asset rises less than does the average price level during inflation, the owners of such an asset are hurt; if the price of the asset rises more, the owners of such an asset benefit.)

- Can you formulate a general rule concerning who gains and who loses from unexpected inflation? (People who hold assets such as loans and bonds that earn an interest rate below the rate of inflation are hurt. People who have debt, such as a home mortgage or car loan, on which they pay an interest rate that is lower than the rate of inflation, are helped. People who hold real assets, such as houses, land, or precious metals are helped or hurt depending on how fast the prices of such assets rise. Moreover, if they purchased such assets with a loan carrying less interest than the rate of inflation, they would gain from such a loan, while those who lent the money would lose from the same loan.)

EVALUATION Ask the students how unanticipated inflation would affect the following people. Is it likely to help them, hurt them, or neither?

- A widow who lives on savings that carry a fixed rate of interest. (Hurt.)

- A family that bought a house and has a fixed-interest-rate mortgage. (Helped.)

- Workers who have a cost-of-living clause in their labor contract that raises wages in accord with any rise in the Consumer Price Index. (Neutral.)

- A grounds maintenance company that earlier signed a 10-year contract to work for a fixed amount per year. (Hurt.)

- A company that issued 30-year bonds to build a new plant ten years earlier. (Helped.)

- A retired individual who lives entirely on a $400 per month pension. (Hurt.)

- A retired individual who lives entirely on bond interest of $5,000 per month. (Hurt.)

- A government whose revenues consist entirely of fixed license fees that it charges business. (Hurt.)

- A government whose revenue comes mainly from a progressive income tax. (Helped because inflation pushes incomes up into higher marginal tax brackets.)

- A government with outstanding debt at fixed rates. (Helped because the debt is paid off with money that has less purchasing power than when the debt was contracted. If the debt was issued at interest rates below those prevailing during inflation, the government will have received cheap credit at the expense of the holders of government bonds and notes.)

- Elderly people. (The answer depends on other conditions. The elderly on retirement incomes that are fixed would lose. But fewer incomes are now fixed than in the past: social security and some pensions are indexed to increase with inflation. Many elderly people own their homes. Such people may choose to sell a home that has gained considerably in market price. They could then secure less expensive housing and could use the remaining proceeds of the sale for living expenses and/or investment.)

Handout 16-1

THE TRIAL OF MS. ANN FLATION

Defendant: Ms. Ann Flation
Charge: Assault on the Economy
Witnesses for the Prosecution:
Ms. Fix Ed Income
Mr. Con Glomerate
Professor I. Can't Getahead
Witnesses for the Defense:
Mr. I.O. "Manny" Bucks
Ms. Iona Lotts
Ms. Ann Flation
Others:
Judge
Prosecuting Attorney
Defense Attorney
Bailiff
Jury

JUDGE: Would the prosecution call its first witness.
PROSECUTING ATTORNEY: Our first witness is Ms. Fix Ed Income.
[MS. INCOME takes the witness stand.]
BAILIFF: Please state your name.
MS. INCOME: Ms. Fix Ed Income.
BAILIFF: Do you swear to tell the truth, the whole truth, and nothing but the truth?
MS. INCOME: I do.
PROSECUTING ATTORNEY: Ms. Income, would you explain to the jury the ways in which the defendant has caused you harm and mental anguish?
MS. INCOME: My late husband, bless his soul, and I scrimped and saved throughout our lives so we could live comfortably in our old age. Now he's gone, and because of the actions of that awful woman, I hardly have enough to eat.
PROSECUTING ATTORNEY: Could you be more specific, Ms. Income?
MS. INCOME: Well, only two years ago, food, rent, and my blood pressure pills took about 60 percent of my income. I had money to buy little gifts for my grandchildren and to have a little entertainment—I used to play bingo every Friday night. Now, the prices of everything have gone up so much I had to move to a smaller apartment, my food bills are much higher, and my medicine costs me a small fortune. Last Christmas I could only give a few home-made cookies to my poor grandchildren, although I love them dearly, and I can no longer afford to play bingo, so I must sit home every night.

"The Trial of Ms. Ann Flation" was written by Carol Allen, Fayette R-III Schools, Fayette, Missouri. We gratefully acknowledge her permission to use this activity. It has been reproduced here with minor editorial changes.

From *Master Curriculum Guide in Economics: Teaching Strategies for High School Economics Courses*. 1985. Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016

PROSECUTING ATTORNEY: Thank you, Ms. Income. You may step down. The prosecution now calls Mr. Con Glomerate.

[MR. GLOMERATE takes the stand.]

BAILIFF: Please state your name.

MR. GLOMERATE: Mr. Con Glomerate.

BAILIFF: Do you swear to tell the truth, the whole truth, and nothing but the truth?

MR. GLOMERATE: I do.

PROSECUTING ATTORNEY: What business are you in, sir?

MR. GLOMERATE: We're diversified—plastics, textiles, small appliances.

PROSECUTING ATTORNEY: Could you tell us just what effects the defendant has had on your business?

MR. GLOMERATE: First of all, our costs have risen dramatically. Labor, raw materials, and all our other costs are higher. Of course, these increased costs force us to raise the prices of our finished products.

PROSECUTING ATTORNEY: Have there been any other detrimental effects?

MR. GLOMERATE: Yes, one with long-run implications. It's very difficult for us to make plans for the future. The prices of new capital goods—construction of plant, purchases of new equipment—lead us to be hesitant to expand our production capabilities.

PROSECUTING ATTORNEY: Thank you, Mr. Glomerate. The prosecution now calls Professor I. Can't Getahead.

[PROFESSOR GETAHEAD takes the witness stand.]

BAILIFF: Please state your name.

PROFESSOR: Professor I. Can't Getahead.

BAILIFF: Do you swear to tell the truth, the whole truth, and nothing but the truth?

PROFESSOR: I do.

PROSECUTING ATTORNEY: Professor, what has been your relationship to the defendant?

PROFESSOR: I teach economics and sociology, so I am well acquainted with Ms. Flation and the consequences of dealing with her. Unfortunately, the fact that I understand her does not make it easier to cope with the effects of what she does.

PROSECUTING ATTORNEY: Would you enlighten us, Professor?

PROFESSOR: We teachers do not have cost-of-living clauses in our contracts. Thus, we find ourselves reluctantly pursuing Ms. Ann Flation—unable to catch up, certainly never overtaking her. Additionally, we find the costs to our students and our college—textbooks, room and board for students, wages to support staff—rising. The increased costs we must pass onto our students threaten our very livelihood. We teachers live in fear that our student population will decline to the point that the knowledge we have so painfully accumulated will be forever lost to future generations. The great legacy we have . . .

PROSECUTING ATTORNEY [Interrupting]: Thank you, Professor. That is all. Your Honor, the prosecution rests.

JUDGE: Mr. Defense Attorney, please call your first witness.

DEFENSE ATTORNEY: Yes, Your Honor. The defense calls Mr. I.O. "Manny" Bucks.

[MR. BUCKS takes the witness stand.]

BAILIFF: Please state your name.

MR. BUCKS: I.O. "Manny" Bucks.

BAILIFF: Do you swear to tell the truth, the whole truth, and nothing but the truth?

MR. BUCKS: I do.

DEFENSE ATTORNEY: Mr. Bucks, what has been your experience with Ms. Ann Flation?

MR. BUCKS: I know her well, and I just don't buy this argument that Ms. Flation is hurting the economy. I don't buy *anything* I can't get on credit. That's why I think Ms. Flation here is such a great gal.

DEFENSE ATTORNEY: Could you explain precisely what you mean?

MR. BUCKS: Well, see, I buy lots of things. Last week I got a new car, real nice, mag wheels . . .

DEFENSE ATTORNEY [Interrupting]: The *explanation,* Mr. Bucks.

MR. BUCKS: Oh, yeah. See, the way I figure it, I buy all this stuff on credit. Later, when I pay it back, thanks to Ms. Flation over there, the dollars won't be worth as much as they are today. I look at it as kind of getting a long-run discount—like buying a Cadillac at a Volkswagen price.

DEFENSE ATTORNEY: Thank you, Mr. Bucks, you can step down. The defense calls Ms. Iona Lotts.

[MS. LOTTS takes the witness stand.]

BAILIFF: Please state your name.

MS. LOTTS: Iona Lotts.

BAILIFF: Do you swear to tell the truth, the whole truth, and nothing but the truth?

MS. LOTTS: I do.

DEFENSE ATTORNEY: Ms. Lotts, what sort of business are you in?

MS. LOTTS: I invest heavily in real estate. I purchased quite a bit of land, some apartment complexes, and some houses I rent out several years ago, when Ms. Flation was a mere child.

DEFENSE ATTORNEY: And have you found the defendant to be cooperative in your real estate ventures?

MS. LOTTS: Most assuredly. My holdings are worth many times today what they were when I bought them. The return on my investment has grown tremendously, thanks to Ms. Ann Flation. If it weren't for her, I might have put my money into a new business venture. While that might have done more than my real estate investments to help the economy grow, I can make more in real estate investment. I don't feel it is my duty to provide charity. "Let the economy take care of itself," is my motto. People should help themselves. Thanks to Ms. Flation, I'm helping myself to quite a bit!

DEFENSE ATTORNEY: Thank you, Ms. Lotts. For our final witness the defense calls the defendant, Ms. Ann Flation.

[ANN FLATION takes the witness stand.]

BAILIFF: Please state your name.

MS. FLATION: Ann Flation.

BAILIFF: Do you swear to tell the truth, the whole truth, and nothing but the truth?

MS. FLATION: I do.

DEFENSE ATTORNEY: Ms. Flation, we have heard some serious allegations here today. Now we would like to hear your side of the story.

MS. FLATION: Gosh, I don't think I've done anything wrong. I can't help it that the little old lady is in trouble or that the professor's college has problems. I admit I've gotten a little out of hand lately, but it really isn't my fault. I'm a victim of circumstance.

DEFENSE ATTORNEY: Please explain.

MS. FLATION: It started out innocently enough—some hikes in prices here, more spending there, wage increases. Pretty soon it was out of control.

I was caught in a wage-price spiral. Demand pulled on one side of me; costs pushed on the other. People started expecting me to increase, and that made them act crazily. I think that's been the hardest thing for me—everyone's expectations. I'm just caught doing what they expect me to do. Producers raise their prices, workers want higher prices, other business costs go way up, and prices do too. It's hard for many people to keep up. The banks and the government get into the action, but nothing seems to make any difference. As I say, I shouldn't be held responsible. Circumstances are beyond my control.

DEFENSE ATTORNEY: Your Honor, the defense rests.

[MS. FLATION steps down.]

JUDGE: Ladies and gentlemen of the jury, you have heard the testimony. What is your verdict?

[JURY deliberates.]

JURY: Your Honor, we have reached a decision.

JUDGE: Would the defendant please rise.

[MS. FLATION stands.]

JURY: Our economy needs to be strong;
Inflation has gone on too long.
The verdict, Your Honor,
This girl is a goner.
The jury finds her in the wrong.

JUDGE: The sentence is 20 months of tight money policy.

LESSON 17

Money Growth and Inflation

TIME REQUIRED One class period

CONCEPTS Money
Monetary policy
Inflation
Aggregate demand

INSTRUCTIONAL OBJECTIVES Students will

- Explain why the amount of money in the economy is important;
- Explain why sustained growth in the money supply that is greater than the long-run growth of output is inflationary;
- State the equation of exchange and define each of its variables;
- Use the equation of exchange to analyze the causes of inflation.

RATIONALE Although many factors may contribute to inflation in the short run, inflation can only be sustained in an economy over an extended period by allowing the supply of money to increase faster than the growth of output. The process of inflation can be simulated in the classroom, and students do so in this lesson. Better students can calculate the effect on inflation in hypothetical situations by completing questions 7 and 8 of Handout 17-1.

MATERIALS

1 Three small bags of candy or three other items desirable to students.

2 A small sack containing unpopped popcorn and another kind of dried seed, such as kidney beans.

3 A copy of Handouts 17-1 and 17-2 for each student.

4 OPTIONAL: A transparency of Handout 17-2 and an overhead projector.

PROCEDURE

1 Give each student 5 to 20 seeds of each kind. It is not necessary to give each student the same amount. Announce that you are going to hold an auction, and that you have three bags of candy to sell.

2 **First auction:** The only acceptable medium of exchange is U.S. currency.[1] Sell the bag to the highest bidder, and write the price it sold for on the chalkboard.

3 **Second auction:** "Expand" the money supply in the classroom by allowing students to use popcorn seeds valued at 25¢ each and U.S. currency. Auction off the second bag to the highest bidder, and write the price it sold for on the chalkboard. Don't become concerned during the bidding process if some students pool their resources. This adds to the excitement of the auction.

4 **Third auction:** "Expand" the money supply to include U.S. currency, popcorn seeds valued at 25¢ each, and kidney beans valued at $1.00 each. Auction off the third bag to the highest bidder, and write the price it sold for on the chalkboard.

5 Distribute Handout 17-1 to the students. You can ask students to complete this independently, or you can use it as the basis for a class discussion. If you give students time to do the exercise independently, conduct a class discussion immediately afterward. Questions 5–8 are designed to show students that determining the "correct" amount of money in the economy is not always an easy job. Question 7 deals with a very important concept in economics, the equation of exchange. The equation of exchange helps us understand the relationship that exists among the quantity of money in the economy, the price level, and the level of physical output produced. The quantity of money in the economy *(M)* times its velocity *(V)*, which is the number of times a year an average dollar is spent on the final output produced in the economy, equals total spending for final output. The price level *(P)* times the level of physical output *(Q)* produced that year equals total receipts for final output. Thus, $M \times V = P \times Q$. If the amount of money in the economy rises and velocity does not change, then either price rises or Q rises or both rise.

If the money supply increases rapidly during a period of unemployment, the increase will act to raise incomes, which in turn will increase spending (demand). More goods and services will be pro-

1 If it is inappropriate to use real U.S. coins or bills in your classroom, provide "play money," e.g., poker chips, colored buttons, or some similar substitute.

duced to meet the higher demand, and thus Q will rise. The result will be to create more jobs and thus reinforce the new expansion of the economy. However, if full employment already exists and national production is consequently already at (or near) capacity, too rapid an increase in the money supply will result in a rise in prices. The reason is that if demand rises when the economy is at or near full employment, it is difficult or impossible to produce more goods and services to meet demand resulting from a rapid rise in the money supply.

6 Ask these questions to summarize the main concepts of the auction and worksheet:

- Under what condition is increasing the money supply inflationary? (When the quantity of money rises more than the increased output of goods and services.)

- Under what conditions is increasing the money supply not inflationary? (When the increase in the quantity of money is less than or equal to growth in output or when the velocity of money declines. These conditions are most likely to exist during recessions.)

- What conclusion can you draw from this? (According to economist Milton Friedman, "Inflation occurs when the quantity of money rises appreciably more rapidly than output, and the more rapid the rise in quantity of money per unit of output, the greater the rate of inflation" [Milton and Rose Friedman, *Free to Choose*, New York, Harcourt Brace Jovanovich, 1980, p. 254].)

7 Project a transparency of Handout 17-2 or give each student a copy. Explain that the GNP Price Deflator is the most comprehensive price index available and is therefore the one that best applies to the economy as a whole. Therefore, many economists consider it the preferred gauge of inflation. Explain that M1 is one measure of the supply of money. This measure consists of currency and coins in circulation, various kinds of checking account balances, and travelers checks. Point out to the students that the bottom of the graph contains two time scales—one for the changes in the GNP Deflator and one for the changes in M1. Make sure the students understand that this alignment of the time scales allows one to look at the behavior of inflation (rate of change in the GNP Deflator) in a particular year (say 1979), and relate that behavior to the rate of change in the money supply (i.e., the change in M1) two years earlier (1977). The chart has been plotted in this manner because experience suggests it takes time for an increase in the money supply to generate inflation. Economists call this a "lagged" effect. Ask questions such as these:

- What does the graph suggest about the relationship between the rate of change in the money supply and rate of inflation? (After allowing for a lag, there is some tendency for them to move together. During the 1960s, 1970s, and through 1981, rises in the rate of growth of the money supply were followed by rises in inflation, although the relationship was not exact. After 1981, the rate of inflation dropped by much more than was suggested by changes in the growth rate of money alone. In other words, the relationship between the increase in money supply and inflation appeared to break down.)

- Refer students to the auction and questions 1-4 on Handout 17-1. Have students associate what happened to the price of the item in the auction between auction one and auction three with what happened to inflation between the 1960s and 1981. (Point out to students that in the auction the amount of money increased and so did the price level. In the U.S. economy between the 1960s and 1981 not only did the trend of both the increase in the *amount* of money and the price level rise, but both the trend of the *rate* at which the money supply was going up and the *rate* at which prices were going up, i.e., the inflation, increased.)

- Refer students to questions 5-8 on Handout 17-1. Explain that during 1982–84 the velocity of the money supply actually fell and that at the same time, real GNP increased significantly. Ask the class to analyze how these factors would affect the relationship between the rate of growth of the money supply and inflation. (See answers to questions 7 and 8 for Handout 17-1, below.) Ask students if these answers are consistent with what the chart in Handout 17-2 portrays. (Yes, a fall in velocity results in less total spending or use of the available supply of money while an increase in output, i.e., real GNP, means that there are more goods and services produced on which to spend the available supply of money. As a result, the increase in the rate of growth of the money supply in 1982–84 was not as inflationary as it would otherwise have been.)

- From the auction and the data graphed on Handout 17-2, can we prove that increases in the rate of growth of the money supply cause inflation? (No, just because there is a similarity in the behavior of two sets of data does not necessarily mean that one causes the other. However, economic theory suggests there should be a relationship in this case, and there is some empirical evidence to support this notion.)

EVALUATION Assess student answers on Handout 17-1.

ANSWERS FOR HANDOUT 17-1

1 The price increased.

2 The quantity of money increased.

3 People spent the extra money.

4 The extra spending caused the price to increase.

5 The price would not have increased.

6 The extra supply of goods available would have more than offset the increased demand for goods, so prices would not have increased and probably would have declined.

7 **a** $800

b The price level will double—from $2 to $4.

c Prices won't change. The increase in the money supply was offset by the rate at which people spent money, so total spending was not affected.

d *V* would have fallen.

e Prices won't change. The increase in the money supply was accompanied by an increase in output. Since aggregate supply increased by the same amount as the increase in aggregate demand, there was no upward pressure on prices.

8 An increase in the money supply will not be inflationary if people cut their rate of spending (*V* drops) or if output increases sufficiently to satisfy the extra demand brought about by the increase in the money supply.

Handout 17-1

INFLATION SIMULATION QUESTIONS

Name _____ Class _____

1 What happened to the price of the item being auctioned off between the first and third auctions? _____

2 What happened to the amount of "money" in the classroom between the first and third auctions? _____

3 What did people do with the extra money they had? _____

4 What effect did this have on the price of the item during the auction? _____

5 What do you think would have happened to the price during the second and third auctions if no one had spent any of the new seed money? _____

6 What do you think would have happened to the price if the number of items offered for sale in the third auction increased from one to say 1,000? _____

7 We can better understand the relationship between money and prices in our economy by looking at the equation of exchange:

$M \times V = P \times Q$

where M = supply of money in the economy
V = number of times an average dollar is spent in one year on the final output produced in the economy
P = price level
Q = physical quantity of final output of goods and services produced in the economy in a year's time

a Assume M = \$200, V = 4, P = \$2, and Q = 400. Therefore, $M \times V = P \times Q$ = _____.

b In the auctions, Q was the same in each auction. Let's assume V was constant as well. In this case, when the money supply went up, prices had to go up as well. Assume now that the money supply *(M)* doubles to \$400, that V is 4, and that Q is 400. What will happen to prices *(P)* when the money supply doubles? _____

c Assume now that M is \$400, Q is 400, but V drops to 2. What happens to P as compared with question 7a?

Why? _____

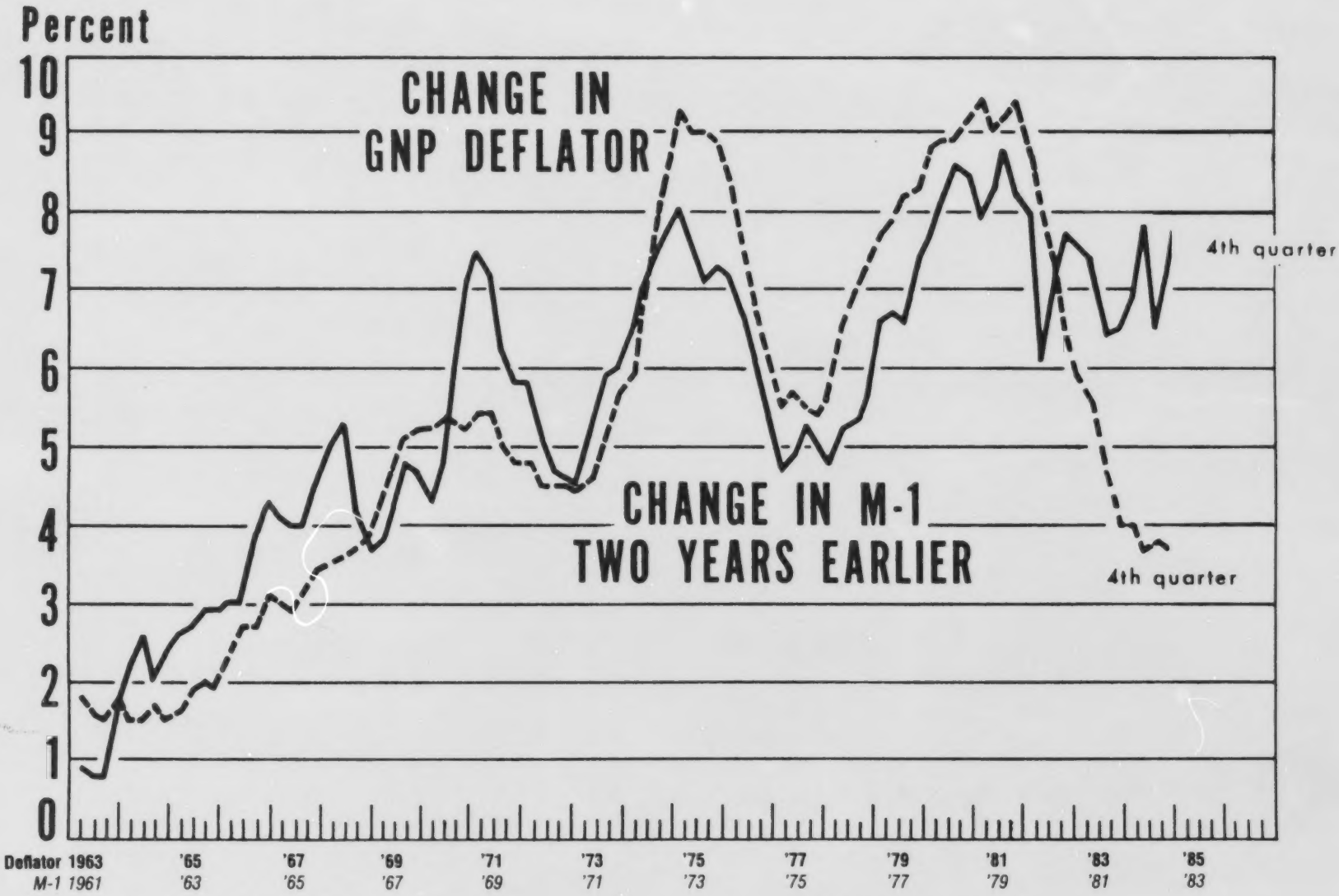
d In the classroom auction, what would have happened to V if no one had spent the "new" money that was created? _____

e Assume now that M is \$400, V is 4, but Q is 800. What happens to P as compared with question 7a? _____
Why? _____

8 Describe the conditions under which an increase in the money supply will not be inflationary. _____

From *Master Curriculum Guide in Economics: Teaching Strategies for High School Economics Courses*. 1985. Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016.

Handout 17-2 Money and Price Changes in the Long Run
(change at annual rates, measured from 8 quarters earlier)



SOURCE: Federal Reserve Bank of New York.

From *Master Curriculum Guide in Economics: Teaching Strategies for High School Economics Courses*. 1985. Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016.

Lesson 18

How the Federal Reserve Controls the Money Supply

TIME REQUIRED Two class periods

CONCEPTS Economic institutions
Money
Monetary policy

INSTRUCTIONAL OBJECTIVES Students will

- Describe the organization of the Federal Reserve System;
- Define monetary policy, open market operations, discount rate, and reserve requirements;
- Explain how the Federal Reserve can influence the amount of money in the United States through monetary policy;
- Compare and contrast expansionary and contractionary monetary policy.

RATIONALE The amount of money in an economy is important because it affects the level of spending in that economy. The level of spending in turn affects the level of output, employment, and prices. Congress has given the Federal Reserve System the responsibility for controlling the amount of money in the U.S. economy. In this simulation and reading, students learn how the Federal Reserve uses the three principal tools of monetary policy to increase or decrease the amount of money and credit available in the economy.

MATERIALS

1 A copy of Handout 18-1 for each student.

2 A copy of Handout 18-2, the Money Sheet, for every 5 students. You should cut up the money sheets and separate them in advance into the four categories they contain.

3 A sheet of paper, 8½" x 11" or larger, with BANK written on it.

PROCEDURE

1 This lesson works best if students have read their textbook assignments on money and banking, the Federal Reserve System, and monetary policy.

2 Give each student a copy of Handout 18-1. Have the students read it and answer the questions at the end.

3 Discuss the answers to the questions. Be sure the students understand the three primary tools of monetary policy.

4 Divide the class into thirds. Give each student in the first group a $10,000 U.S. Treasury bond; in the second group, $10,000 in currency; and in the third group, $10,000 in a checking account. Explain to the class that the students with the $10,000 bonds have each lent the U.S. Treasury $10,000 and that the piece of paper they have is an I.O.U. from the government, acknowledging the debt; the piece of paper is not money. Students with $10,000 in a checking account or $10,000 in currency have money; only the forms in which they hold the money differ. Ask all students with money (checking accounts or currency) to raise their hands. Count the number of hands and multiply by $10,000 to determine the initial amount of money in the classroom. Write this number on the chalkboard under the heading "Money Supply."

5 Now tell four of the students with bonds that they need money and must sell their bonds. Tell four of the students with money that they have extra money and can use it to buy bonds in order to earn interest. Have the eight students exchange their bonds and money. Now ask the class if there has been any change in the amount of money in the classroom. (No)

6 **Open Market Operations:** Tell the class that you are the Federal Reserve System. Tell four more students with bonds that they need money and must sell their bonds. The Fed has decided to buy the bonds. Give each student $10,000 in currency in exchange for the $10,000 bond. Ask the class questions such as these:

- What has happened to the amount of money in the classroom? (It has increased $40,000).
- Where did the money come from? (The Federal Reserve)
- Where did the Federal Reserve get the money? (The Fed created the money).
- What tool of monetary policy did the Fed use? (Open Market Operations).
- What was the direction of the policy? (Expansionary).

7 Reverse step 6, that is, have the Fed sell bonds to the students and thus take in money from those students. Once again, ask all students with money to raise their hands. Count hands and multiply by $10,000 to show that when the Fed sells bonds, it has the opposite effect on the money supply than when the Fed buys bonds; the effect on the money supply is contractionary.

8 Reserve Requirements: Ask all the students with checking account money to raise their hands. Multiply the number of hands by $10,000, and write this number on the chalkboard under the heading "Bank Deposits." Have a pile of currency equal to this amount with the sign marked "BANK" beside it. Tell the students that the bank has their money on deposit and would like to lend some of it. The amount the bank can lend depends on the reserve requirements set for banks by the Federal Reserve. Explain that if the reserve requirement were 100 percent, none could be lent; if it were 25 percent, 75 percent could be lent. Set the Fed's reserve requirement for banks initially at 50 percent, and loan the equivalent of half the bank's checking account deposits to a student. (NOTE: A 50 percent reserve requirement was adopted for computational convenience. Actual reserve requirements for banks were around 12 percent as the year 1985 began. With a reserve requirement of 50 percent, an addition of $500,000 in reserves to one or more banks can result in a maximum expansion of loans and of the money supply of $1,000,000 by the banking system as a whole.*)

Have the student sign an I.O.U. for the amount of the loan you disbursed, according to the procedure in the previous paragraph. Ask the class the following questions:

- How much money is in the classroom now? (Count it.)
- By how much has the money supply increased? (By the amount of the loan.)
- What action caused the increase in the money supply? (The bank's loan.)
- If the Fed cut the reserve requirement, what could the bank do? (Further expand its loans.)

The cut in the reserve requirement would be an example of an expansionary monetary policy. If the Fed raised the reserve requirement, this would be an example of a contractionary monetary policy.

9 Discount Rate: Announce to the class that the bank is unable to meet its reserve requirements and that it is $500,000 short of reserves. Explain that the Federal Reserve will loan money to the bank and that the interest rate the Fed charges the bank is known as the discount rate, i.e., the Federal Reserve will allow the bank to borrow $500,000 of reserves at, say, 10 percent interest. Ask these questions:

- Would the bank borrow this money? (Yes.)
- Why? (Because if the bank does not meet legal reserve requirements it is subject to penalty.)

Have the bank borrow the money by signing an I.O.U. to the Federal Reserve Bank. Ask the class:

- What happened to the bank's reserves? (They have increased by $500,000.)
- What will happen to the reserves when the loan is repaid? (They will shrink by $500,000.)

10 Currency-Deposit Mix (OPTIONAL—use with Procedure 11): Tell your students that when they decide to deposit checks and currency they receive in a bank, the amount of money in the economy will in all likelihood increase because money held in a bank can be lent to someone else. Have all students with $10,000 currency come to the bank to make a deposit. Give each student $10,000 in checking money in exchange for the $10,000 in currency. Using a 50 percent reserve requirement, show how much more money can be created as a result of the bank's ability to expand loans. Because it must keep half the deposits it holds as reserves, it can lend $250,000 of the $500,000 it received in borrowed reserves plus 50 percent of the new deposits from the students.

11 Money Multiplier (OPTIONAL—for use with Procedure 10): You may also wish to ask the students:

- What happens to the money that is lent? (Usually a borrower spends the money on something.)
- Will any of the borrowed money probably be deposited in banks? (Yes.)
- Will these deposits enable banks to further expand their loans? (Yes.)
- Will such actions expand the nation's money supply? (Yes.)
- How large will the expansion be? (That depends on where the loan money—after its use by the borrower—is deposited. For simplicity, assume that

* If necessary, turn to a college textbook on introductory economics or on money and banking for a fuller explanation of the "money multiplier" that results from reserve requirements. Also see Procedure 11 in this lesson.

none is redeposited in the lending bank. That means that loans are deposited in other banks—in effect, throughout the banking system. When redepositing goes on throughout the banking system, an addition of reserves of $500,000 enables the available money in the system to multiply. The "money multiplier" is defined as the reciprocal of the reserve requirement. With a 50 percent reserve requirement, the multiplier is therefore 2, that is 1/0.50. Consequently, with a reserve requirement of 50 percent, an addition of $500,000 in reserves to one or more banks can result in a maximum expansion of loans—and of the money supply—of $1,000,000 by the banking system as a whole.) (NOTE: If necessary turn to one of the sources suggested in the footnote to Procedure 8 for a fuller explanation.)

EVALUATION Assess student answers to the questions at the end of Handout 18-1 and to those on the classroom simulation.

ANSWERS FOR HANDOUT 18-1

a Describe the organization of the Federal Reserve System. (The Federal Reserve System consists of a seven-member Board of Governors in Washington, D.C., and twelve regional banks.)

b What is monetary policy? (Deliberate action by the Federal Reserve to affect the expansion or contraction of the money supply in order to maintain the trend of economic growth, employment, and prices at desired levels.)

c In the table below, indicate how the Federal Reserve would use each of the three monetary tools to pursue an expansionary policy and a contractionary policy.

Monetary Tool	Expansionary Policy	Contractionary Policy
Open market operations	Buy government securities	Sell government securities
Discount rate	Lower	Raise
Reserve requirements	Lower	Raise

d What kind of monetary policy would the Federal Reserve probably follow if the country was experiencing an annual inflation rate of 15 percent? Why? (A contractionary policy because inflation results from too rapid an increase in the supply of money or too rapid an increase in economic growth, or both.)

e What kind of monetary policy would the Federal Reserve probably follow if the country was experiencing a severe recession with high unemployment and falling prices? Why? (An expansionary policy because a lack of growth in the money supply helps prolong or aggravate a recession. An expansionary monetary policy would usually act to lower interest rates, which would stimulate investment in plant and equipment and in inventories and thereby help to curb recession or help the economy to climb out of a recession.)

Handout 18-1

THE FEDERAL RESERVE SYSTEM AND MONETARY POLICY

Name _____ Class _____

The amount of money in an economy is important because it affects the level of spending in a country. Too much spending can cause inflation while too little spending can cause unemployment and declining levels of production. In the United States, Congress has assigned the responsibility for controlling our money supply to the Federal Reserve System.

The Federal Reserve System or "Fed" has functioned as the central bank of the United States since 1913. It consists of a seven-member Board of Governors in Washington, D.C., plus twelve regional banks throughout the country. The Federal Reserve System is designed to be as nonpolitical as possible.

As a central bank, the Fed manages the money supply by influencing the lending activity of commercial banks and other financial institutions. But the major part of its direct influence comes about through its relations and dealings with commercial banks, from which the effects spill over to the financial system as a whole.

The deliberate actions of the Federal Reserve System to expand or contract the money supply are called **monetary policy.** The purpose of monetary policy is to maintain the trend of economic output, employment, and prices at desired levels. The Board of Governors and the twelve heads of the regional reserve banks regularly meet eight times a year to decide on Federal Reserve monetary policy. A policy of the Fed designed to expand the growth of money and credit in the economy is known as an **expansionary** (or loose) monetary policy. A policy to restrict the growth of money and credit in the economy is known as a **contractionary** (or tight) monetary policy. The creation of too much money can cause inflation, and the creation of too little money can cause recession.

The Fed has three primary tools with which to carry out monetary policy. These are open market operations, reserve requirements, and the discount rate.

Open market operations refer to the Fed's buying and selling of U.S. government securities in order to add to or subtract from the reserves of the nation's commercial banking system. Government securities, such as U.S. Treasury bills, notes, and bonds, are issued by the U.S. Treasury in return for money borrowed from individuals and businesses in order to finance government spending. If the Federal Reserve wants to put money into the economy, it buys some of these government securities by writing a check on itself. If, for instance, the Fed buys $10,000 worth of government securities with such a check, it creates the $10,000 used to pay for them. The sellers are not $10,000 richer, since they no longer own the securities, but the money supply grows because there is $10,000 of new money in the economy. If the Fed wants to pursue a contractionary monetary policy, it sells some of the government securities it owns. The money that is paid to the Federal Reserve for the securities is removed from the economy, so the money supply shrinks. Open market operations are the most frequently used tool of monetary policy.

A second important tool of monetary policy consists of **reserve requirements** for bank deposits. The Federal Reserve requires that banks keep as reserves a certain fraction of the deposits they hold. These reserves must be kept as balances at Federal Reserve banks or as cash the banks have on hand (i.e., vault cash). Banks that fail to meet their reserve requirements are subject to monetary penalties. These required reserves cannot be lent to borrowers.

If the Fed wants to pursue a contractionary monetary policy, it can raise reserve requirements, thereby restricting the amount of funds banks can lend. If the Fed wants to pursue an expansionary monetary policy, it can lower reserve requirements. Let's say you deposit $10,000 at your local bank and the reserve requirement on deposits is 15 percent. This means that your bank would have to keep $1,500 on reserve at the Fed (.15 × $10,000 = $1,500). It could lend the other $8,500 to borrowers. If the Fed were to lower its reserve requirement to 10 percent, then the bank could lend $500 more of your $10,000 deposit, or a total of $9,000. Such an expansion of bank lending causes the money supply in the economy to increase. However, if the Fed were to raise its reserve requirements to 20 percent, the bank could lend only $8,000 of your $10,000 deposit, thus curbing the possible increase in the money supply. Changes in reserve requirements can be a very pow-

From *Master Curriculum Guide in Economics: Teaching Strategies for High School Economics Courses*. 1985. Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016.

erful tool of monetary policy but this tool is used infrequently precisely because it is so powerful. Most often, the Fed desires to make gradual or minor changes in policy, aims for which changes in reserve requirements are not suitable.

The **discount rate,** the third tool of monetary policy, is the interest rate the Federal Reserve charges banks that borrow money. If a bank borrows from the Federal Reserve, the reserves lent to the bank are created by the Fed. This process increases the amount of money and credit in the economy. The Federal Reserve does not automatically allow a bank to borrow from it whenever the bank wants to. The Fed can refuse to make such a loan. If the discount rate is low and the Fed does not discourage banks from borrowing from it, the Federal Reserve will foster an expansionary monetary policy. If the discount rate is high and the Fed discourages banks from borrowing from it, the Federal Reserve will foster a tight monetary policy. The discount rate is probably the least strong of the three principal tools of monetary policy, but the Federal Reserve does use a change in it to indicate an overall tightening or loosening of monetary policy.

Questions:

a Describe the organization of the Federal Reserve System. _____

_____

_____

_____

b What is monetary policy? _____

_____

_____

_____

c In the table below indicate how the Federal Reserve would use each of the three monetary policy tools to pursue an expansionary policy and a contractionary policy.

Monetary Tool	Expansionary Policy	Contractionary Policy
Open market operations		
Discount rate		
Reserve requirements		

d What kind of monetary policy would the Federal Reserve probably follow if the country had an annual inflation rate of 15 percent?_____Why?_____

_____

_____

_____

e What kind of monetary policy would the Federal Reserve probably follow if the country was in a severe recession with high unemployment and falling prices?_____Why?_____

_____

_____

_____

U.S.A.

10,000

DOLLARS

TREASURY BOND

TEN THOUSAND DOLLARS

YOUR BANK

$10,000

in

Checking Account

PROMISSORY NOTE

No. _____

Signed _____

$ _____

_____ 19 _____

I _____ promise to pay

to _____

on _____

_____ Dollars

U.S.A.

10,000

DOLLARS

TREASURY BOND

TEN THOUSAND DOLLARS

YOUR BANK

$10,000

in

Checking Account

U.S.A.

10,000

DOLLARS

TREASURY BOND

TEN THOUSAND DOLLARS

YOUR BANK

$10,000

in

Checking Account

U.S.A.

$10,000

$10,000

U.S.A.

$10,000

$10,000

U.S.A.

$10,000

$10,000

Lesson 19

Analyzing Fiscal Policy

TIME REQUIRED Two class periods

CONCEPTS
Fiscal policy
Role of government
Aggregate demand
Unemployment
Inflation
Broad social goals

INSTRUCTIONAL OBJECTIVES Students will

- Describe how federal fiscal policy is used to try to stabilize the economy;
- Distinguish a contractionary from an expansionary fiscal policy;
- Evaluate economic conditions and determine the fiscal policy that can improve those conditions.

RATIONALE The fiscal policy decisions that the President and Congress make have tremendous consequences for the economy. Students should understand fiscal policy and how it works.

MATERIALS A copy of Handouts 19-1, 19-2, and 19-3 for each student.

PROCEDURE

1 Before starting this lesson, students should be familiar with the meaning of the terms GNP, recession, economic growth, inflation, and fiscal policy.

2 Distribute a copy of Handout 19-1 to each student. Have students read the handout and answer all the questions on it except question 5 in Part II. Tell the students they will work on the last question as a class.

3 Discuss the answers to the questions on the handout. As you do so point out that this exercise is based on a Keynesian or demand management approach. This approach postulates that the broad social goals of economic growth, full employment, and price stability can be attained through the management of aggregate demand.

The Keynesian approach has assumed that a trade-off between unemployment and inflation is possible. When unemployment is too high, the goal is to increase aggregate demand enough to lower unemployment to an acceptable level without, at the same time, causing or aggravating inflation. When there is little unemployment and inflation prevails, the goal is to decrease aggregate demand and increase unemployment to levels that eliminate inflation, i.e., promote a stable price level. But the trade-off between unemployment and inflation has not worked well since the beginning of the 1970s. Inflation has more or less persisted under conditions of both high and low unemployment. Consequently, it is understandable that critics of Keynesian policies have increased and new approaches have been put forward. Question 5 in Part II of the handout gives you the opportunity to present the views of economists whose names are associated with the principal alternative approaches or theories:

- Advocates of the "rational expectations" approach argue that people come to expect changes in economic policy and act to offset the intended results of such changes. Example: if the economy goes into recession, people "expect" fiscal policies (say tax cuts) that are designed to stimulate business investment. Businesses will therefore refrain from investing until the tax cut takes place. Consequently, their actions while awaiting the tax cut may aggravate the recession and then create too strong a recovery in investment after the tax cut becomes effective. Advocates of the rational expectations approach claim that in this fashion recessions and booms are exaggerated as a result of government policy rather than smoothed out.
- Advocates of "monetarism" argue that steady economic growth and price stability can be achieved with a steady increase in the money supply of 3–5 percent a year. They contend the record shows that aggregate demand management does not achieve steady economic growth and price stability.
- Advocates of "supply-side economics" believe fiscal policy should be designed to provide incentives to increase aggregate supply. They believe this can be accomplished by lowering taxes in order to encourage people to innovate more, to start more businesses, to invest more, to work harder—in short, to produce more because they may keep more of the income they receive.

EVALUATION

1 Give a copy of Handout 19-2 to each student. After the students complete the handout, assess the quality of their answers.

2 Give a copy of Handout 19-3 to each student. After the students complete the handout, assess the quality of their answers.

ANSWERS TO QUESTIONS IN HANDOUTS

Handout 19-1

PART I

1 Expansionary. A personal tax cut increases consumer demand. A business tax cut increases investment demand. An increase in government spending increases government demand.

2 Contractionary. The tax increases reduce consumer and investment demand. Government demand remains the same.

3 Expansionary. Higher government spending without a corresponding rise in tax receipts increases total demand in the economy.

4 Contractionary. Lowering government employees' wages decreases government demand. Higher taxes decrease consumer and investment demand.

PART II

	Column A	Column B	Column C	Column D
1	increase	decrease	increase	toward deficit
2	decrease	increase	decrease	toward surplus
3	increase	decrease	increase	toward deficit
4	decrease	increase	decrease	toward surplus

The fifth question in the table is designed to show that traditional fiscal policy doesn't provide solutions to the problems presented by the simultaneous presence of inflation and excessive unemployment. Use this question to examine the principal alternatives to demand management economics, which are given in the discussion included in Procedure 3, above.

Handout 19-2

1 The economy is in a recession. Unemployment is rising, and real GNP and investment are falling. The price level is increasing slightly.

2 Increasing economic growth and reducing unemployment while achieving stable prices.

3 Increase government spending. Reduce business and personal taxes. Do either or both of the above on a scale sufficient to put the federal government's budget into deficit or to increase a deficit that may already exist.

4 Answers depend on the values of each student. Students who dislike big government may emphasize reducing taxes. Advocates of government social programs may emphasize more government spending. Be flexible in assessing the answers.

Handout 19-3

1 The main economic problem is inflation. The inflation rate over the past four quarters is 14 percent a year [(250/220) × 100]. The economy is growing, and the unemployment rate is declining.

2 Decreasing the rate of inflation. Cutting government spending.

3 Increase business and personal taxes. Do either or both of the above on a scale sufficient to put the federal government's budget into surplus or to decrease a deficit that may already exist.

4 Answers depend on the values of each student. Students who value government programs may emphasize tax rises. Those who feel business and personal spending is more productive than government spending may advocate lower government expenditures. Be flexible in assessing the answers.

Handout 19-1

THE TOOLS OF FISCAL POLICY

Name _____ Class _____

Changes in federal taxes and federal government spending that are designed to affect the level of aggregate demand (and in some cases aggregate supply) in the economy are called **fiscal policy. Aggregate demand** is the total amount of spending on goods and services in the economy during a stated period of time. Aggregate demand consists of consumer spending, government spending, and investment spending. **Aggregate supply** consists of the total amount of goods and services available in the economy during a stated period of time.

During a recession, aggregate demand is usually too low to bring about full employment of resources. Government can increase aggregate demand by spending more, cutting taxes, or doing both. These actions often result in budget deficits because the government spends more than it collects in taxes. Increasing government spending without increasing taxes or decreasing taxes without decreasing government expenditures should increase aggregate demand. Such an expansionary fiscal policy should increase employment, inflation, or both.

If the level of aggregate demand is too high, government can reduce its spending, increase taxes, or do both. These actions should result in a larger budget surplus or a smaller budget deficit than existed before. Such a contractionary fiscal policy should lower the level of aggregate demand, and the economy will experience less employment of its resources, less inflation, or both.

PART I

Directions: Decide whether each of the following fiscal policies of the federal government is expansionary or contractionary. Write "expansionary" or "contractionary" and explain the reasons for your choice.

1 The government cuts business and personal income taxes and increases its own spending. _____

2 The government increases the personal income tax, social security tax, and corporate income tax. Government spending stays the same. _____

3 Government spending goes up while taxes remain the same. _____

4 The government reduces the wages of its employees while raising taxes on consumers and business. Other government spending remains the same. _____

Continued

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Handout 19-1 (concluded)

PART II

Instructions: Test your understanding of fiscal policy by completing the first four questions in the table below. All your choices for each situation must be consistent, that is, you should choose either an expansionary or contractionary fiscal policy. Fill in the spaces as follows:

Column A: Objective for Aggregate Demand
Write "increase" if you wish to increase aggregate demand.
Write "decrease" if you wish to decrease aggregate demand.

Column B: Action on Taxes
Write "increase" if you wish to increase taxes.
Write "decrease" if you wish to decrease taxes.

Column C: Action on Government Spending
Write "increase" if you wish to increase government spending.
Write "decrease" if you wish to decrease government spending.

Column D: Effect on Budget
Write "toward deficit" if you wish to increase the deficit (or reduce the surplus).
Write "toward surplus" if you wish to reduce the deficit (or increase the surplus).

	(A) Objective for Aggregate Demand	(B) Action on Taxes	(C) Action on Government Spending	(D) Effect on Budget
1. The national unemployment rate rises to 12%				
2. Inflation is strong and its rate is now 14% per year				
3. Surveys show consumers are losing confidence in the economy, retail sales are weak, and business inventories are increasing rapidly.				
4. Business sales and investment are expanding rapidly, and economists believe a strong inflation lies ahead.				
5. Inflation persists while unemployment stays high.				

Handout 19-2

CAST YOUR VOTE

Name _____ Class _____

Assume you are a member of Congress. A member of your staff has just given you the following statistics on the economy:

	Year Ago Quarter	Last Quarter	Estimate for Quarter Now Ending
Real Gross National Product (annual rate in billions of 1972 dollars)	$1,475	$1,395	$1,375
Consumer Price Index	195	201	203
Unemployment rate	7%	10.5%	10.5%
Gross private investment (in billions of 1972 dollars)	$217	$195	$160

1 What economic problem is the nation facing? _____

2 What broad social goals are you most interested in achieving? _____

3 What fiscal policy measures might be appropriate to achieve these goals? _____

4 What exact fiscal policy measures would *you* recommend? Why? _____

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Handout 19-3

CAST YOUR VOTE (AGAIN)

Name _____ Class _____

Assume you are a member of Congress. A member of your staff has just given you the following statistics on the economy:

	Year Ago Quarter	Last Quarter	Estimate for Quarter Now Ending
Real Gross National Product (annual rate in billions of 1972 dollars)	$1,485	$1,534	$1,550
Consumer Price Index	220	250	260
Unemployment rate	9%	7%	6.5%
Gross private investment (in billions of 1972 dollars)	$194	$218	$228

1 What economic problem is the nation facing? _____

2 What broad social goals are you most interested in achieving? _____

3 What fiscal policy measures might be appropriate to achieve these goals? _____

4 What exact fiscal policy measures would *you* recommend? Why? _____

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Lesson 20

Why Economists Disagree

TIME REQUIRED Two class periods

CONCEPTS Broad social goals
Inflation and deflation
Monetary policy
Fiscal policy

INSTRUCTIONAL OBJECTIVES Students will

- State the assumptions, values, theoretical support, and applicable time periods underlying recommendations concerning fiscal and monetary policy that are in conflict;
- Explain why economists sometimes disagree on policy recommendations.

RATIONALE Although economists agree much more than they disagree, the opinions of prominent economists on economic policy often conflict. This lesson leads students to understand why economists disagree, and this understanding should help students make their own judgments about economic policies.

MATERIALS

1 A copy of Handouts 20-1, 20-2, 20-3, and 20-4 for each student.

2 A transparency of Visual 20-1.

3 An overhead projector.

PROCEDURE

1 Give a copy of Handout 20-1 to each student. Have the students read it silently. Then discuss the reasons why economists disagree.

2 Distribute a copy of Handout 20-2 to each student. Ask the students to read it while keeping in mind that they will be asked to analyze each professor's arguments on the basis of differences in time periods, in assumptions, in economic theories, and in values.

3 Distribute a copy of Handout 20-3 to each student. In class discussion, analyze the arguments of Professor Cut. Elicit answers from the class on each major point and record them on the chalkboard. Try to reach a consensus on each major point, time periods, assumptions, theoretical support, and values. At the end of the discussion, you may want to project a transparency of the analysis of Professor Cut's arguments in Visual 20-1. Don't show the analysis of the other professors' arguments. Be flexible in comparing student answers to those on the transparency. There are many correct ways to state these points.

4 Divide the class into three groups. Tell one group it will analyze the arguments of Professor U. R. Nutts, another the arguments of Professor E. Z. Money, and another the arguments of Professor Fred Critic.

5 Allow each group about 15 minutes to analyze its professor's arguments, using Handout 20-3. Appoint a recorder for each group or have each group choose a recorder to enter the group's conclusions on the handout.

6 Solicit analysis from one group at a time. Have each group's recorder write the group's conclusions on the chalkboard. Have the rest of the class evaluate the conclusions. Compare the conclusions with those on the transparency.

7 Ask the students which economist they agree with most and why.

EVALUATION

1 Give a copy of Handout 20-4 to each student. Have the students use the procedure in Handout 20-3 to analyze Milton Friedman's argument. Ask the students which of the four professors would be most likely to agree with Professor Friedman.

2 Ask the students to bring to class recent commentaries or articles about current economic policy. Have the class compare them, using the four reasons why economists disagree.

SAMPLE ANSWERS FOR HANDOUT 20-3

Professor Cut

Major point: Tax cut will stimulate economy.
Time period: Present and near future.
Assumption: The administration's budget proposals are not inflationary.
Theoretical support: Tax cuts stimulate business investment as well as spending by all private sectors and may encourage greater work effort.
Values: Economic freedom and distrust of big government.

Professor Nutts

Major point: Higher interest rates will cause recovery to fail.
Time period: Next year.
Assumption: Deficits are large and getting larger.
Theoretical support: Government borrowing is so large it causes interest rates to rise and crowds out consumer and business borrowing.
Values: Tax cuts must be fair, and fairness means taxing the wealthier more than the poorer. Government must maintain economic security for Americans with low incomes.

Professor Money

Major point: Relatively free expansion of money will bring down interest rates and sustain recovery.
Time period: Near future.
Assumption: Relatively free expansion of money supply by Federal Reserve will sustain the recovery.
Theoretical support: Lower interest rates increase consumer spending and business investment.
Values: Economic growth is our most important goal.

Professor Critic

Major point: There will be another recession.
Time period: One to two years from now.
Assumption: Federal Reserve System will continue past policies—policies that have brought about inflations and recessions.
Theoretical support: Not enough money growth causes recessions; too much money growth causes inflation.
Values: Steady economic growth without inflation or recession is desirable.

ANSWERS FOR HANDOUT 20-4

(Professor Friedman would agree with Professor Fred Critic.)
Major point: Excessive money growth from July 1982 to July 1983 will cause renewed inflation and eventually recession or stagflation.
Time period: One or two years from the time he writes.
Assumptions: Fed will continue to fine tune economy. That is, during recessions, the Fed will increase the money supply too much. Then, when the Fed sees inflation, it will put on monetary brakes, causing recession.
Theoretical Support: Historical evidence shows a relationship of growth in the money supply to inflation and recession. Too much growth in the money supply first causes excessive economic expansion and then inflation. Too little growth in the money supply causes recession.
Values: Fed policy usually has harmful results.

VISUAL 20-1

SAMPLE ANSWERS TO HANDOUT 20-3, WHY ECONOMISTS DISAGREE

Professor Cut

Major point: Tax cut will stimulate the economy.

Time period: Present and near future.

Assumption: The administration's budget proposals are not inflationary.

Theoretical support: Tax cuts stimulate business investment as well as spending by all private sectors and may encourage greater work effort.

Values: Economic freedom and distrust of big government.

Handout 20-1

WHY ECONOMISTS DISAGREE

Name _____ Class _____

It is not unusual to find "experts" disagreeing with each other. Experts disagree over all sorts of matters—nuclear power, arms limitation, and who will win the Super Bowl. Why do experts disagree? How can the average person make sense out of the differing viewpoints and recommendations? Here are several important factors that often lead economists to different conclusions.

1 *Different Time Periods*

One economist might state that the present policy of the government will lead to inflation. Another might disagree. Both could be right if they are talking about the effects of the policy on inflation at different times, for example, six months from now as compared to two years from now.

2 *Different Assumptions*

Because an economy is a complex system, it is often hard to predict the effects of a particular policy or event. Therefore, in order to be able to make predictions, economists usually must hold certain assumptions (or beliefs). But economists often differ in their assumptions. For example, one economist might assume (or believe) that the federal budget deficit will become larger next year; another might not. Their different assumptions could be the result of how much economic growth—and tax revenues and government spending—they assume (or believe) will take place.

3 *Different Economic Theories*

Economists agree on many matters such as, "If the price of beef goes up and nothing else changes, people will buy less beef." That is a prediction with which nearly all economists would agree because it rests on the generally accepted "law of demand." However, economists have yet to settle a number of important questions, especially those concerning macroeconomics. Macroeconomics deals with the behavior of the economy as a whole or large subdivisions of it, and how to influence that behavior. Economists have several different theories or explanations about what influences macroeconomic behavior. Until these theories are reconciled or until one of them is widely agreed on as best, economists will disagree on macroeconomic questions because they are using different theories. The same applies to certain microeconomic questions. Microeconomics concerns specific units or parts of an economic system, such as firms, industries, households, and the relations among these units.

4 *Different Values*

Economics is concerned with explaining what is happening in the economy. It is also concerned with predictions. The economist should be able to say to the President or Congress, "If you follow Policy One, then X, Y, and Z will happen. If you follow Policy Two, then Q, R, and S will happen. Pick the policy giving the results you like better." In practice, such statements by economists often contain more than analysis and the prediction of results. Their statements often recommend policies they like because the results agree with their own values, i.e., the results they prefer. For example, some economists will recommend Policy One because X, Y, and Z will happen and they favor achieving X, Y, and Z. Other economists will recommend Policy Two because they favor achieving results Q, R, and S. Such disagreements are basically about which outcomes are preferred by the economists. The economic policies recommended are determined by the preferred outcomes.

From *Master Curriculum Guide in Economics: Teaching Strategies for High School Economics Courses*. 1985. Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016.

Handout 20-2

TAKE AN ECONOMIST TO LUNCH

Name _____ Class _____

Four distinguished professors of economics are discussing current economic policy at a luncheon press conference attended by leading reporters of business news. Let's listen in:

Professor T. X. Cut: Let's separate issues. On the fiscal policy side, this administration's budget proposal is not extravagant or inflationary. The tax cuts are partly balanced by spending cuts. With so many people still unemployed and so many factories still closed, a policy of this kind cannot rekindle inflation. The tax cuts will stimulate consumer spending, work efforts, and business investment in an economy just emerging from a recession. We must let people keep the fruits of their labor and savings as incentives to produce and invest more. The spending cuts will prevent government from continuing to receive ever increasing pieces of the nation's economic pie.

Professor U. R. Nutts: Excuse me, Dr. Cut. But that position makes little sense. First of all, let me say that this administration's tax cuts and spending cuts have been and are grossly unfair. The tax cuts have favored the rich, and the spending cuts have reduced programs that help maintain economic security for Americans with low incomes. The present deficit—and those projected for the future—are so large that they threaten our recovery from the recession. Here's why. All deficits must be paid for by government borrowing, and because the government is borrowing so much money, there is less available for consumers and businesses. With government borrowing now threatening to increase, interest rates will rise, and that will reduce spending for houses and cars and—in fact, spending on anything bought with a loan—as well as business investment that must be financed by borrowing. In other words, some important private borrowing will be "crowded out." Sometime next year, the recovery will therefore weaken, and we'll move back into recession. Taxes should be raised, especially on the wealthy, and at least some government programs that help low-income people should be restored to their original funding levels.

Professor E. Z. Money: Let me just comment, U.R., on your point about federal spending and borrowing "crowding out" private consumer spending and business investment. This is where monetary policy comes in. The Federal Reserve must continue to allow relatively free expansion of money and credit. If the Fed makes more money available, there will be less pressure for interest rates to rise. We'll be able to sustain the recovery in housing, autos, and other sectors. And businesses will be able to get loans for investments at affordable interest rates. Continuing our economic growth by sustaining this recovery is the most important task we have before us. Increasing taxes now would only reduce total spending, and thus threaten the recovery.

Professor Fred Critic: Excuse me, Dr. Money. You forget that the expansion of the money supply we're currently witnessing is part of a long history of bungling by the monetary policymakers. Our most recent recession was brought on by the Fed's jamming on the monetary brakes by an abrupt reduction in the increase of the money supply in order to bring inflation under control. They overdid it, as they always do, and produced a recession. Now, they're overdoing it in the other direction, stepping on the monetary accelerator and increasing the money supply too rapidly. That will stimulate the economy all right, but in a year or two those actions will rekindle inflation. The Fed will then again jam on the monetary brakes and produce yet another recession. Everyone knows this. Interest rates right now are higher than they should be because everyone expects more inflation later. Only moderate growth in the money supply can bring interest rates down in the long run. The only way to get back on a long-term, stable economic growth path is to reduce money growth to a steady, predictable, noninflationary level.

Ladies and gentlemen, that's all we have time for. Let's give our distinguished panel a round of applause.

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Handout 20-3

ANALYZING WHY ECONOMISTS DISAGREE

Name _____ Class _____

Economists disagree because they:

1 Use different time periods.

2 Make different assumptions.

3 Have different theories about how the economy works.

4 Have different values and ideas about which economic goals are most important.

Now analyze each professor's comments using the following format:

Name of Professor: _____

Major point: _____

_____

Time period: _____

Assumptions: _____

_____

Theoretical support: _____

_____

_____

_____

_____

Values: _____

_____

_____

_____

_____

From *Master Curriculum Guide in Economics: Teaching Strategies for High School Economics Courses*. 1985. Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016.

Handout 20-4

A CASE OF BAD GOOD NEWS
—Milton Friedman

President Reagan, politicians of all political persuasions, journalists specializing in economics, Wall Street, the business community—all these and many more are hailing the recent economic statistics showing rapid growth in output and employment as very good news indeed.

One group of economists—the monetarists—are a conspicuous exception. We were also an exception to what I labeled in February as "misleading unanimity" among economic forecasters (*Newsweek,* Feb. 7, 1983). Almost to a person economic forecasters were predicting a slow and sluggish recovery. We predicted that "1983 will be a year of rapid and vigorous economic growth."

Monetary Explosion: That judgment was based on two considerations: the length and severity of the recession that ended in December 1982, and the monetary explosion that was then in process—a rise in M1 at the annual rate of 15 percent from July 1982 to January 1983. It seemed to us that "this monetary explosion assures vigorous economic growth in the coming months"—but also that "unfortunately, if it continues much longer, it will also produce a renewed acceleration of inflation and a sharp rise in interest rates." The monetary explosion did produce vigorous growth. Unfortunately, it also did continue—at the annual rate of more than 14 percent from January to July. Interest rates have already risen sharply. Inflation has not yet accelerated. That will come next year, since it generally takes about two years for monetary acceleration to work its way through to inflation.

The "good news," that output grew at the annual rate of nearly 9 percent in the second quarter of this year and may equal that record in the third quarter, is really bad news—the sign of an overheated economy headed for trouble. We do not need another sharp but brief expansion—like 1980 to 1981—followed by a relapse into recession. We need moderate growth at a rate that can be maintained for a long time along with continued reduction in inflation.

The only way to maintain anything like the recent hectic pace of real growth would be to keep the monetary explosion going. But even if the Fed has learned nothing from experience, the market has—as its recent reactions to money-growth figures demonstrate. If the monetary explosion continued, both interest rates and inflation would react much more promptly than in the past. Both would head toward the sky. That reaction would make it nearly impossible for the Fed to continue the monetary explosion. However reluctantly, it will have to step on the brakes—as it already has apparently started to do.

The monetary explosion from July 1982 to July 1983 leaves no satisfactory way out of our present situation. The Fed's stepping on the brakes will appear to have no immediate effect. Rapid recovery will continue under the impetus of earlier monetary growth. With its historical shortsightedness, the Fed will be tempted to step still harder on the brake—just as the failure of rapid monetary growth in late 1982 to generate immediate recovery led it to keep its collective foot on the accelerator much too long. The result is bound to be renewed stagnation—recession accompanied by rising inflation and high interest rates.

Recession and the Election: The only real uncertainty is when the recession will begin. That will depend partly on the pattern of monetary growth over coming months, partly on other developments that cannot now be foreseen. Monetarists have always emphasized that the time delay between monetary change and economic change is not only long but also highly variable. Indeed, that is why we are so skeptical about the kind of monetary "fine-tuning" that the Fed has engaged in and why we favor steady monetary growth.

The precise timing of the recession will largely determine the political climate of election year 1984. Both President Reagan's supporters and his opponents are acting as if they expect recent favorable economic developments to continue through 1984—as evidenced by the search on the part of both for other issues to stress. They will be right if the recession does not begin before the third quarter of 1984. But if the recession should begin in the first or second quarter of 1984—as is entirely possible—the situation will be very different. In that case the election campaign would be conducted in an environment of declining output, rising unemployment, rising inflation and high interest rates—hardly an environment favorable to an incumbent.

SOURCE: Milton Friedman, "A Case of Bad Good News," *Newsweek,* September 26, 1983. Copyright 1983, by Newsweek, Inc. All Rights Reserved. Reprinted by permission.

Lesson 21

Why Specialize and Trade?

TIME REQUIRED One class period

CONCEPTS Absolute advantage
Comparative advantage
Interdependence
Specialization

INSTRUCTIONAL OBJECTIVES Students will

- State the principles of absolute advantage and comparative advantage;
- Explain how economic welfare increases with specialization and trade.

RATIONALE The levels of living improve when people specialize in producing what they can produce most efficiently and trade for what else they need. In this lesson students learn how economic welfare can be increased through specialization and trade by applying the principles of absolute advantage and comparative advantage in a classroom trading simulation.

MATERIALS

1 A copy of Handout 21-1 for each student

2 OPTIONAL: several small prizes

PROCEDURE

1 Divide the class into thirds. Designate one group as farmers, one group as tailors, and one group as builders.

2 Distribute Handout 21-1. Have students write their role assignments (farmer, tailor, or builder) in the first blank. In the second blank have the farmers write "food," the tailors "clothing," and the builders "shelter." Have students read the instructions.

3 **Round 1.** Let students circulate among themselves to conduct their trades. After three minutes end the round and have students return to their seats. Now have them subtract 100 from each column for basic necessities. Any student with a negative number remaining "dies" and is out of the game. Ask who has the highest net gain. You may wish to award a small prize to this student.

4 **Round 2.** Before beginning, have students enter new initial production figures. Run Round 2 in the same manner as Round 1.

5 **Round 3.** Run the round. Have students tally their net gains from all three rounds. The student with the highest overall net gain is the classroom winner. (OPTIONAL: Award prize with appropriate small ceremony.)

6 Ask students how they were able to achieve a level of living above the bare minimum for survival. (By specializing and trade.) Ask if any students chose not to specialize. Why might a person not specialize? (To avoid the needs for dependence on others.)

7 Explain to the class that the game they played illustrates the concept of **absolute advantage.** Absolute advantage exists when one person (or firm or region or nation) can produce a product at the lowest resource cost compared to any other suppliers of the product. In our example, farmers had an absolute advantage in food production, since they could produce more food per person than anyone else per round.

8 Now divide the class in half and designate one group as skilled workers and the other group as unskilled workers. Tell the skilled workers that they can produce any one of these three sets of products in one round: (1) 400 units of food, (2) 400 units of shelter, (3) 100 units of food and 300 units of shelter. Tell the unskilled workers they can produce any one of these three sets in one round: (1) 300 units of food, (2) 100 units of shelter, (3) 75 units of food and 75 units of shelter. Explain to the class that here the skilled workers have an absolute advantage in the production of both food and shelter. Ask the class: Is there any reason a skilled worker would want to engage in trade with an unskilled worker under these conditions? (The answer is yes, but don't indicate this immediately; you are likely to get a variety of responses.) Explain to the class that you are going to run a couple of experiments to see if the answer can be determined.

a Have all the workers produce set (3), the mix of food and shelter. Students remain in

their seats and you simply count hands. Determine the total number of units of food produced in the class by multiplying the production of each skilled worker by 100 and that of each unskilled worker by 75 and adding up the results. Determine the total number of units of shelter produced in the class by multiplying the production of each skilled worker by 300 and that of each unskilled worker by 75 and adding up the results. Now add the two results and explain that this is the total production in the economy without specialization.

b Now introduce specialization by asking all skilled workers to produce shelter and all unskilled workers to produce food. Add up the total production in the economy. There should be much more total production than before. Now have all skilled workers produce food and all unskilled workers produce shelter. There should be much less total production than before. Explain to the class that in order for specialization and trade to increase output, people should specialize by producing the product in which their **comparative advantage** is greatest.

c Explain that people have a comparative advantage in producing a product when their opportunity cost of production is lower than that of other producers. In this exercise the opportunity cost of 1 unit of food to the skilled worker was 1 unit of shelter (since 400 of each could be produced), but to the unskilled worker the opportunity cost of 1 unit of food was only one-third unit of shelter (since the unskilled worker could either produce 100 units of shelter or 300 units of food). Conversely, the opportunity cost of 1 unit of shelter to the skilled worker was 1 unit of food, but to the unskilled worker the opportunity cost was 3 units of food. Thus, the skilled worker has a comparative advantage in building and the unskilled worker a comparative advantage in food production.

EVALUATION Use the answers to the questions in the Procedure section. In addition, the following might be asked:

- Can you think of examples of absolute advantage between regions of the United States? Between countries of the world?
- Can you think of examples of comparative advantage between regions of the United States? Between countries of the world?
- When people, regions, or nations specialize and trade, there must be a winner and there must be a loser. True or false? (False. Trade takes place because it is mutually beneficial to both parties and the level of living of both increases.)
- Define absolute advantage. (The advantage which one person, region, or country enjoys over others from more efficient production of a particular product.)
- Define comparative advantage. (A comparative advantage exists for a producer if the opportunity cost of production is lower than that of other producers.)
- Jennifer and her younger brother Tom have been told by their parents to mow the lawn and wash the car. There is enough equipment for them to work together on each task. Should they do so? Jennifer can mow the lawn in one hour and wash the car in a quarter of an hour. Tom can mow the lawn in two hours and wash the car in one hour. What is Jennifer's absolute advantage in? (Washing the car and mowing the lawn) What is Tom's absolute advantage in? (Neither) What is Jennifer's comparative advantage in? (Washing the car, since her opportunity cost is lower. She can work four times as fast as Tom in car washing—one quarter hour vs. 1 hour to complete the washing—but only twice as fast as Tom in mowing—1 hour vs. 2 hours to complete the mowing.) What is Tom's comparative advantage in? (The mowing, since his opportunity cost is lower.) How would you recommend they divide the work in order to complete the tasks in the least possible time? (Jennifer should wash the car alone and then help her brother Tom finish the mowing.)

Handout 21-1

TRADING RECORD

Name _____ Class _____

Instructions: You are a skilled _____. You can spend your time each round by using it all to produce 600 units of _____. However, you may instead produce each of 100 units of food, 100 units of shelter, and 100 units of clothing. You must choose what you will produce at the beginning of each round.

Your basic survival needs are 100 units each of food, clothing, and shelter during each round. If you do not acquire a minimum of 100 units of each of these items, you will die. If you use all your time to produce each of these items for yourself, you will be able to produce enough to meet your basic needs, but you will have nothing left over. As an alternative, you can spend your time working to produce what you produce best, and then you can trade this production for whatever else you need. You can use any extra production above what's needed for basic living to raise your level of living.

The objective of the game is to achieve the highest level of living possible consistent with your abilities. Use the trading record to record your initial production on line one and your trades on subsequent lines. *Example:* If you are a farmer and decide to produce 600 units of food, write 600 under the food column on line 1. Let's say you then trade 100 units of food with Andrea for 100 units of shelter. On line 2 subtract 100 from your food column and add 100 to your shelter column. Let's say you then trade 150 units of food for 100 units of clothing with Tim. To show this, subtract 150 from your food column and add 100 to your clothing column. At the conclusion of each round, subtract 100 from each column for your basic needs.

If any column is negative, you are dead and out of the game. If you are still in the game, determine your net gain for the round by adding your net gains for food, clothing, and shelter (line 5). The person with the highest numerical net gain achieves the highest standard of living and wins the round.

EXAMPLE OF TRADING EXCHANGE RECORD

Transaction	Food	Shelter	Clothing		Net Gain
1 Initial production	+600				
	−100				
2 Trade with Andrea	500	+100			
	−150				
3 Trade with Tim	350		+100		
4 End-of-round basic needs	−100	−100	−100		
5 Net gain	250		0	=	250

TRADING RECORD

Transaction	Food	Shelter	Clothing	Net Gain
1 Initial production				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				

From *Master Curriculum Guide in Economics: Teaching Strategies for High School Economics Courses*. 1985. Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016.

Lesson 22

Foreign Currencies and Foreign Exchange

TIME PERIOD One class period

CONCEPTS Exchange rate
Money
Markets
Supply and demand

INSTRUCTIONAL OBJECTIVES Students will

- Explain why citizens or businesses of one country might require the currency of another country;
- Explain how foreign exchange values are influenced by supply and demand;
- Explain how an increase (or decrease) in the availability of a currency may cause a decline (or rise) in that currency's foreign exchange value.

RATIONALE Money has several functions. Among them is its ability to serve as a medium of exchange, a store of value, and a measure of value. Using money in international trade is complicated because almost every country has a different currency. The value of one currency in terms of another is set in the foreign exchange markets by the supply and demand for that currency. This lesson takes up the basics of foreign exchange and contains a simulation that concerns the international money market.

MATERIALS

1 A copy of Handouts 22-1 and 22-2 for each student

2 Mints, M&M's, similar small candies, or other equally divisible goods such as almonds or peanuts. (A 1-pound bag should be enough for three classes of 35 students each.)

3 Enough duplicates of Handout 22-3 (peseta notes) to equal one sheet of notes per student plus a few extra sheets. Cut the sheets apart before the class meets.

4 Exactly 25 American dollars. Before class, make three copies of Handout 22-4 and cut them apart into dollars.

PROCEDURE

1 Give each student a copy of Handout 22-1, and announce, "Today we will look at money and the process by which it is exchanged and valued by two or more countries." Have the students read Handout 22-1.

2 Announce that you are setting up a foreign currency market in order to play "The Foreign Currency and Exchange Game." As you show the students the dollar replicas, tell them you will sell one mint for one American dollar.

3 Tell the students they will act as citizens of Spain. Distribute four or five Spanish peseta notes to all students. Give them the different amounts in random fashion.

4 Announce that the only way they can buy mints is with one of the American dollars you hold. Also announce that you can sell only five mints during one session of the currency market. Students will therefore be required to trade their pesetas for your dollars before they can buy any of the five candies.

5 Appoint a student to be the banker. You will pay the banker one mint for the work done during each round. Give the banker the rest of the pesetas and five dollars. Set up the bank at the front of the room.

6 Appoint another student to be tally keeper. You will also pay this student one mint per round. Copy the first two columns of the tally table on page 166 on the chalkboard. (In order that students not know in advance how many rounds will be played, do not add the columns for rounds 2 and 3 until you are ready to begin those rounds. Leave room at the top of the table to write in larger amounts of pesetas.) The tally keeper will make a mark in the appropriate space for each price at which you sell an American dollar in each round.

7 **Round 1:** Announce that the bidding for American dollars will begin. The only acceptable payment is Spanish pesetas. To simplify the chart, the minimum price will be 50 pesetas. Let students

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bid. Decide at what prices you will sell the dollars. At first, you will get low bids. Accept a few. Then the bids should start to increase. As each bid is accepted, the bidder should go to the bank and exchange the Spanish money for an American dollar. The tally keeper should make a mark on the chart. Continue until the banker announces that you have sold the five American dollars available for this round. Stop the bidding. Allow the owners of American dollars to come to you and exchange the dollars for the candy.

8 **Round 2:** Increase the supply of Spanish pesetas by distributing another four or five peseta notes to each student. Announce the beginning of Round 2. Have available another set of five American dollars and five mints. The banker and the tally keeper will perform the same jobs as in the previous round. Repeat the bidding process. When the five American dollars are sold, stop the bidding and allow the owners of the dollars to get their candy.

9 **Round 3:** Announce that the mint producers' costs have decreased, because (cite one or more of the following causes) productivity in their factories has risen; the cost of raw materials has decreased a great deal; strong competitors have entered the business, whose costs are not as high. Since the costs of making mints has declined a great deal, you will be able to provide two mints for each American dollar. Do not distribute any additional pesetas before this round. Complete Round 3. Have the banker and tally keeper continue their duties. Distribute mints as before.

Tally Table for Procedure 6

Price (in pesetas)	Round 1	Round 2	Round 3
220			
210			
200			
190			
180			
170			
160			
150			
140			
130			
120			
110			
100			
90			
80			
70			
60			
50			

10 Ask the following questions to review the activity:

- How many total pesetas were paid for the five American dollars in Round 1? In Round 2? In Round 3? In other words, what were the prices of five dollars in terms of pesetas?
- How wide were the price variations of pesetas per dollar in each round?
- Did the successive rounds establish a price pattern?
- What determined the exchange rate of pesetas and dollars for each other? (You should steer students toward a supply and demand explanation if it does not occur naturally.)
- How does the pattern of exchange rates illustrate the concept of supply and demand? (The exchange rate for dollars in terms of pesetas rose when the increased supply of pesetas brought a higher peseta price for each dollar demanded.)
- In general how is the foreign exchange value of a currency set in terms of other currencies? (By supply and demand.)
- What happens when there is a decrease in costs and prices that benefit foreign customers? (They will be more willing to buy the producer country's currency since more goods can be bought with a given amount of that currency. This will increase the demand for the producer country's currency and cause the price of that currency to increase.)

EVALUATION Distribute a copy of Handout 22-2 to each student. After the students complete the handout, assess their answers.

ANSWERS FOR HANDOUT 22-2

1 Medium of exchange, store of value, measure of value.

2 Supply and demand.

3 Depreciates. Appreciates.

4 Foreign exchange markets.

5 It would increase.

6 It would decrease.

Handout 22-1

FOREIGN CURRENCIES AND FOREIGN EXCHANGE

Name _____ Class _____

Pesetas, liras, pounds, rubles, yen, and kroner. The world of foreign currencies often seems confusing. Not only are many of the names unfamiliar, but we also want to know what each is worth in terms of U.S. dollars.

Because all of these currencies are money, they all serve the same functions. Money is a medium of exchange, a store of value, and a measure of value. As a **medium of exchange,** money can be used to purchase (in exchange for) goods and services. As a **store of value,** money can be saved to use in the future. As a **measure of value,** money allows us to express the price of things. We can say a car costs so many dollars, while an audiocassette costs many fewer dollars.

Now to a basic question: How do we know what a foreign exchange rate is, that is, how much any currency is worth in terms of other currencies. The simple answer is that a currency is worth whatever people are willing to pay for it. This means it is a case of supply and demand. If there is little demand for a country's currency or a great supply available for foreigners to buy, the money will be worth less than if there is a high demand for it or a small supply available for foreigners to buy.

For example, when Americans increase their purchases of imports, more U.S. dollars are sent abroad or are exchanged for foreign currencies in order to pay for the imported goods. As the supply of dollars to foreigners thus increases, the dollar tends to be worth less in terms of other currencies. Under such conditions we say the dollar "depreciates." The same general analysis holds true for the currencies of other nations. (If a currency increases in worth in terms of other currencies, we say it "appreciates.")

Currency values are established and exchanges are carried out in foreign exchange markets. These markets exist at banks, at the offices of foreign exchange dealers, and other places where one country's currency or checks can be exchanged for those of another country. But the greatest amount of foreign exchange activity takes place by telephone, telex, or other rapid means of communication used by commercial banks, businesses, and others who deal in large amounts of foreign exchange.

Foreign exchange values can change every day—most days by very little, some days by enough to make a difference for the people or businesses that are "converting" (i.e., exchanging) one currency into another. In the longer run, changes of major magnitude can occur. In the early 1980s, the worth of foreign currencies, in general, *fell* a great deal against the U.S. dollar. Looking at the situation the other way, the dollar *rose* a great deal against foreign currencies. For example, in 1979 the worth of the Swiss franc in terms of the dollar averaged 60 U.S. cents, and the worth of the West German mark averaged 55 U.S. cents. In mid-February, 1985, the Swiss franc had fallen to about 36 U.S. cents and the West German mark to about 31 U.S. cents. In about five years or so, from the Swiss and German points of view, the franc had depreciated (declined) by 40 percent in terms of dollars, and marks had depreciated by 44 percent in terms of dollars. From the U.S. point of view, the dollar had appreciated (risen) by 66 percent and 80 percent, respectively.

From *Master Curriculum Guide in Economics: Teaching Strategies for High School Economics Courses*. 1985. Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016

Handout 22-2

FOREIGN EXCHANGE WORKSHEET

Name _____ Class _____

1 The three functions of money are to serve as:

_____

_____

_____

2 The value of any currency is determined by the _____ of it and the _____ for it.

3 When a currency decreases in value, we say it _____.
When a currency increases in value, we say it _____.

4 What do we call the places or means of communications by which the value of one country's currency is established in terms of other currencies, and the currencies are traded? _____

_____

_____

5 Assume the United States produces new products that citizens of other countries buy in large quantities. All other things being equal, what will happen to the value of the American dollar in terms of foreign currencies? _____

_____

_____

_____

6 Assume a large increase in the number of U.S. citizens who travel to foreign countries. All other things being equal, what will happen to the value of the American dollar in terms of foreign currencies? _____

_____

_____

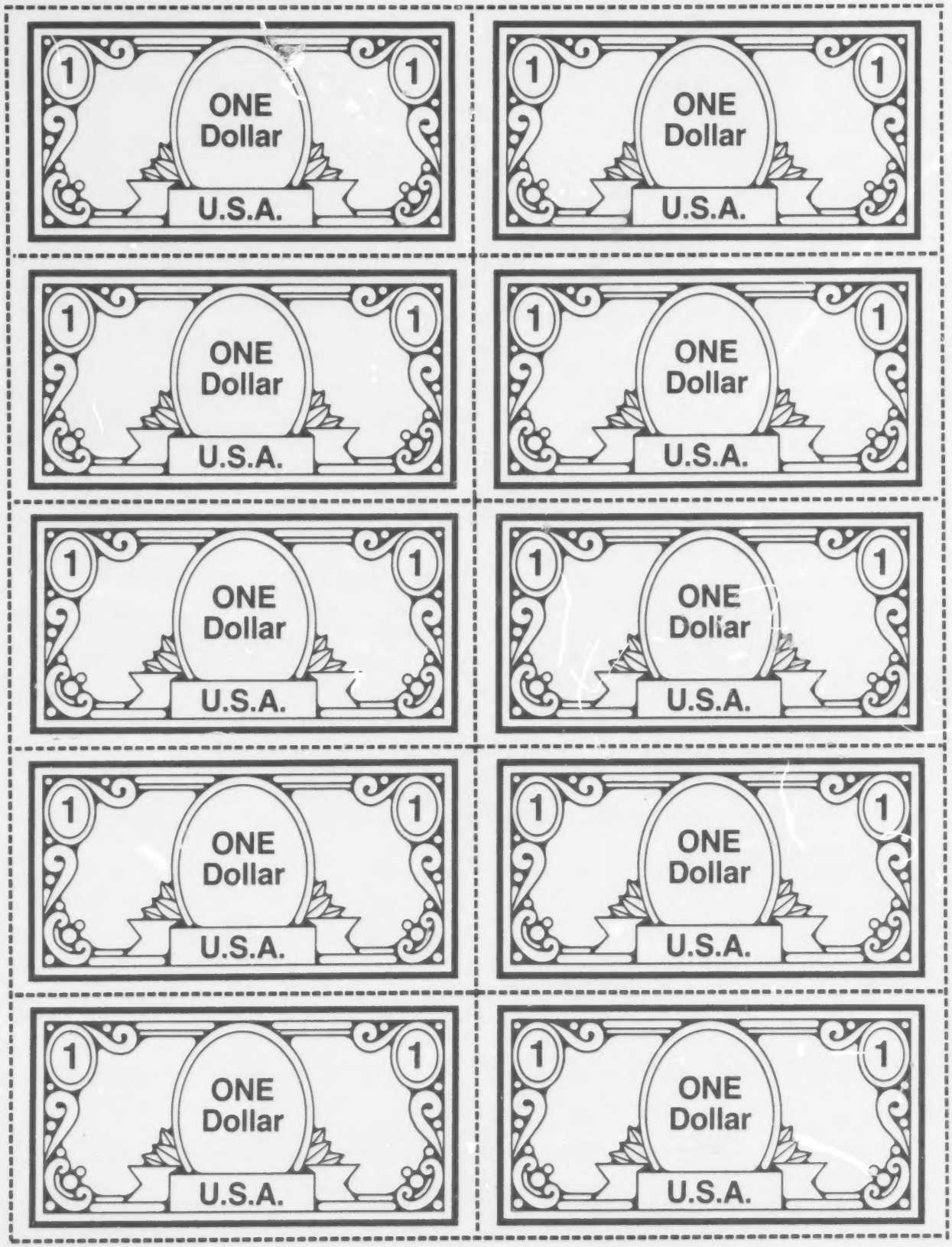
_____

From *Master Curriculum Guide in Economics: Teaching Strategies for High School Economics Courses*. 1985. Joint Council on Economic Education, 2 Park Avenue, New York, NY 10016.

Handout 22-3
Money Sheets (approximately one per student)

Handout 22-4

You will need 25 American dollars



Appendix

Sample Outline of a One-Semester High School Course in Economics
(18 weeks)

I AN INTRODUCTION TO ECONOMICS AND THE BASIC ECONOMIC PROBLEM (2 weeks)

Major economic concepts

1 Scarcity
2 Opportunity cost and trade-offs
3 Productivity
4 Economic systems
5 Economic institutions and incentives
6 Interdependence

Content

1 The basic economic problem
a Scarce resources, relatively unlimited wants, and the need to make choices;
b Human resources, natural resources, and capital goods.

2 Making choices
a All personal, business, and social choices involve opportunity costs and trade-offs;
b Making choices involves rational analysis and an orderly approach, such as the following
(1) State the problem or issue
(2) Determine the personal or broad social goals to be attained
(3) Consider the principal alternative means of achieving the goals
(4) Select the economic concepts needed to understand the problem and use them to appraise the merits of each alternative
(5) Decide which alternative best leads to the attainment of the most goals.

3 Economic systems and institutions
a All societies must answer the questions, "What to produce?" "How to produce?" and "For whom to produce?"
b Economic decisions can be made through tradition, command, and market systems
c The United States uses a mixed market system
(1) Description
(2) Circular flow of income

Lessons in Teaching Strategies for High School Economics Courses

Lesson 1 Scarcity, Choices, and Decisions
Lesson 2 Different Means of Organizing an Economy
Lesson 3 The Circular Flow of Economic Activity
Lesson 4 Getting More or Using Less

Other JCEE publications

Teaching Strategies: Junior High School Level
Lesson 1 Scarcity
Lesson 2 Productive Resources
Lesson 3 Who Does What?
Lesson 4 Arctic Survival
Lesson 6 An Economics Hunt
Lesson S4 Productivity in Shoemaking

Teaching Strategies: World Studies
Lesson 1 A Primitive Economy
Lesson 2 The Game of Scarcity and Allocation
Lesson 3 Tradition, Market, and Command Economic Systems
Lesson 6 Using Economic Data to Compare Types of Economic Systems
Lesson 9 The Problem of Modern Command Economies—Meeting Consumer Needs

Teaching Strategies: Using Economics in Social Studies Methods Courses
Lesson 1.8 We Need Each Other
Lesson 1.9 Working Together
Lesson 2.10 Making More with Less
Lesson 3.12 Meeting a Demand

The Economics of Energy
Lesson 9 Geologist's Dilemma

Teaching Strategies: Consumer Economics
Lesson 1.6 The Economics of Household Production
Lesson 2.1 Interdependence in the Marketplace
Lesson 4.3 Increasing Productivity

Give & Take (audiovisual series)
Program 1 You Choose: Scarcity and Personal Decision Making

Program 2 We Choose: Scarcity and Social Decision Making
Program 6 A Key to Productivity: Human Capital

Income-Outcome$ (computer-based series)
Circular-flow simulation

II MARKETS, SUPPLY, AND DEMAND (4 weeks)

Major economic concepts

1 Markets and prices
2 Supply and demand
3 Exchange

Content

1 Demand
- **a** Relationship between price and quantity demanded
- **b** Determinants of demand
- **c** Change in quantity demanded vs. change in demand
- **d** Elasticity of demand

2 Supply
- **a** Relationship between price and quantity supplied
- **b** Determinants of supply
- **c** Change in quantity supplied vs. change in supply
- **d** Elasticity of supply

3 Equilibrium
- **a** Why price and quantity move toward equilibrium
- **b** Shifts in supply and demand
- **c** Surpluses and shortages
- **d** Real-world examples of supply and demand

4 The functions of markets and prices
- **a** Information function
- **b** Incentive function
- **c** Rationing function

5 Exchange

Lessons in Teaching Strategies for High School Economics Courses

Lesson 5 A Market in Wheat
Lesson 6 The Market Never Stands Still
Lesson 7 The Equilibrium Price and Quantity
Lesson 8 Markets Allocate Resources
Lesson 9 When There Are Floors and Ceilings
Lesson 10 Responsiveness of Quantity Demanded to Price Changes

Other JCEE publications

Teaching Strategies: Using Economics in Social Studies Methods Courses
Lesson 2.5 By the Bottle, by the Bucket
Lesson 2.6 How Much?
Lesson 3.9 How Much Should We Buy?

Teaching Strategies: Consumer Economics
Lesson 2.3 How Stretchy Is Demand?
Lesson 3.3 The Cost of Rent Control

Teaching Strategies: Basic Business and Consumer Education
Lesson 12 Market Simulation—The Big Apple

Economics/Political Science Series (E/PS): Analyzing Crime and Crime Control
Lesson 4 How to Control Crime

E/PS: Analyzing Health Care Policy
Lesson 2 Supply of and Demand for Medical Services in the United States

The Economics of Energy
Lesson 1 Shortages, Shortages, Shortages
Lesson 2 Price Changes; Buyer and Seller Behavior
Lesson 3 Which Energy Source?
Lesson 4 Standby Petroleum Allocation Act
Lesson 5 Efficient Uses of Energy
Lesson 6 Real Price of Energy
Lesson 7 Spreading Consequences
Lesson 8 Geologist's Dilemma
Lesson 11 The Economics of Conservation

Give & Take (audiovisual series)
Program 9 Market Prices: Supply and Demand
Program 10 Changing Market: Supply and Demand
Program 11 Take Your Choice: Substitution

Income-Outcome$ (computer-based series)
Supply/demand for loanable funds—simulations and tutorials

III BUSINESS, LABOR, AND MARKET STRUCTURE (3 weeks)

Major economic concepts

1 Economic institutions and incentives
2 Competition and market structure
3 Income distribution

Content

1 Role of business
- **a** Purpose of business
- **b** Forms of business ownership
- **c** Role of profit system

2 Market structure
- **a** Competition and lack of competition
- **b** Types of market structure
  - **(1)** Perfect competition
  - **(2)** Monopolistic competition
  - **(3)** Oligopoly
  - **(4)** Monopoly

3 Labor and wages
- **a** The labor force
- **b** Wage determination
- **c** Development of the labor movement
- **d** The government and labor
- **e** The place and responsibility of unions in the American economy today

Lessons in Teaching Strategies for High School Economics Courses

Lesson 12 When There Isn't Pure Competition
Lesson 13 Until the Last Unit Equals. . .

Other JCEE publications

Teaching Strategies: Basic Business and Consumer Education
Lesson 9 What Is an Adequate Profit?
Lesson 11 Some Factors in Corporate Investment Decisions

Teaching Strategies: U.S. History
Lesson 7 Labor Markets
Lesson 8 Growth of the Corporation
Lesson 9 Changing Structure of American Industry
Lesson 10 Changing Role of Government in the Economy

Teaching Strategies: Junior High School
Lesson S2 The Shoe Industry
Lesson S5 Unions in the Shoe Industry

Teaching Strategies: Consumer Economics
Lesson 1.3 What Are the Real Profits?
Lesson 4.1 The Money Crunch—A Corporate "Crisis"

The Economics of Energy
Lesson 10 Organization of Petroleum Exporting Students and Teachers (OPEST)

Give & Take (audiovisual series)
Program 5 Where Do Jobs Come From? Derived Demand
Program 12 Why Competition? Market Structure

IV THE ROLE OF GOVERNMENT
(2 weeks)

Economic concepts

1 Market failures
2 The role of government

Content

1 The scope and purpose of government
- **a** Correcting market failures
- **b** Establishing rules
- **c** Characteristics of public goods

2 Taxation and criteria of a good tax

3 Federal, state, and local government spending

4 Government regulations

Lessons in Teaching Strategies for High School Economics Courses

Lesson 1 Scarcity, Choices, and Decisions
Lesson 11 Third-Party Costs and Benefits

Other JCEE publications

TAX WHYS—Understanding Taxes (audiovisual series)
Program 1 Taxes Raise Revenue
Program 2 Taxes Influence Behavior
Program 3 Taxes Involve Conflicting Goals
Program 4 Taxes Affect Different Income Groups
Program 5 Taxes. . .Can They Be Shifted?
Program 6 Taxes. . .What Is Fair?

Give & Take (audiovisual series)
Program 7 Private or Public? Public Goods and Services
Program 8 Changing Taxes: Public Goods and Services

Income-Outcome$ (computer-based series)
Role of government in economic growth (simulation)

Teaching Strategies: Consumer Economics
Lesson 1.2 Let's Go for a Swim
Lesson 3.1 Where Do You Stand?
Lesson 3.2 Private or Public?
Lesson 3.4 Consumer Protection: Public Benefit vs. Economic Efficiency?

Teaching Strategies: U.S. History
Lesson 10 Changing Role of Government in the Economy

Teaching Strategies: Using Economics in Social Studies Methods Courses

Lesson 3.10	Who Gets What?
Lesson 3.14	Pleasantville
Lesson 4.3	Environmental Choices

Economics/Political Science (E/PS): Analyzing Tax Policy

All Lessons

E/PS: Analyzing Government Regulation

All Lessons

Teaching Strategies: Basic Business and Consumer Education

Lesson 13	An Evaluation of Income Tax Provisions
Lesson 14	Government Regulation: Effects on Business Decisions
Lesson 15	The Cost of Consumer Protection

V MACROECONOMICS (5 weeks)

Major economic concepts

1. Gross National Product
2. Unemployment
3. Inflation and deflation
4. Aggregate supply
5. Aggregate demand
6. Monetary policy
7. Fiscal policy
8. Money

Content

1. Measuring economic performance
   - a Gross National Product (GNP)
   - b National Income (NI)
   - c Consumer Price Index (CPI)
   - d Unemployment rate
   - e Constructing and interpreting measurement concepts such as graphs, charts, tables, index numbers, amounts vs. rates, ratios, real vs. nominal
2. Business cycles, inflation, and unemployment
   - a The role of aggregate demand and supply
   - b Description of a business cycle
   - c Causes of inflation
   - d Causes of unemployment and deflation
3. Money and banking
   - a Functions of money
   - b Functions of the banking system
   - c Functions of the Federal Reserve System
4. Means of managing the economy
   - a Monetary policy
     - (1) Goals of monetary policy
     - (2) Tools of monetary policy
   - b Fiscal policy
     - (1) Automatic stabilizers
     - (2) Discretionary stabilizers
     - (3) Government deficits and the national debt
5. Alternative approaches to managing the economy
   - a Demand management
   - b Supply management
   - c Monetarism
   - d Rational expectations

Lessons in Teaching Strategies for High School Economics Courses

Lesson 14	Economic Ups and Downs
Lesson 15	Economic Goals
Lesson 16	The Trial of Ms. Ann Flation
Lesson 17	Money Growth and Inflation
Lesson 18	How the Federal Reserve Controls the Money Supply
Lesson 19	Analyzing Fiscal Policy
Lesson 20	Why Economists Disagree

Other JCEE publications

Economics/Political Science Series (E/PS): Analyzing Inflation and Its Control

Lesson 1	Inflation Quiz
Lesson 2	Price Indexes—Out of Many, One
Lesson 3	What Is Inflation?
Lesson 4	The ??Whatzit?? Game
Lesson 5	The Economic Effects of Inflation
Lesson 6	Some Cures for Inflation

Teaching Strategies: Consumer Economics

Lesson 2.4	The Consumer Price Index and Price Change
Lesson 4.2	"Tighten the Reins or Loosen Them Up" (A Monetary Control Tool Simulation)

Teaching Strategies: Junior High School Level

Lesson 8	The Consumer Price Index and Price Change
Lesson 9	Using Cartoons to Teach Economics
Lesson 10	Economic Growth

Teaching Strategies: U.S. History

Lesson 11	The Hoover Administration: Role of Government in the Economy
Lesson 12	The Great Depression and After: Role of Government in the Economy

Teaching Strategies: Using Economics in Social Studies Methods Courses
- Lesson 2.9 Who Is to Blame?
- Lesson 3.11 Life during the Great Depression
- Lesson 3.13 What's the Relationship?
- Lesson 4.6 Economic Goals

EIPS: Analyzing Tax Policy
- Lesson 10 The Politics of Taxation

Income-Outcome$ (computer-based series)
- Sources of economic growth (simulation)
- Fiscal and monetary policymaking (simulation)

VI THE WORLD ECONOMY (2 weeks)

Major economic concepts

1 Absolute and comparative advantage and barriers to trade
2 Exchange rates and the balance of payments
3 International aspects of growth and stability

Content

1 Why nations trade
   - **a** Absolute and comparative advantage
   - **b** Benefits of trade
   - **c** Barriers to trade

2 Analyzing international trade
   - **a** The balance of trade and the balance of payments
   - **b** The role of exchange rates

3 The world economy
   - **a** Economic growth
   - **b** Economic development and developing nations
   - **c** Foreign trade and investment

Lessons in Teaching Strategies for High School Economics Courses

- Lesson 21 Why Specialize and Trade?
- Lesson 22 Foreign Currencies and Foreign Exchange

Other JCEE publications

Economics/Political Science Series: Analyzing Growth Policies of Developing Countries
- Lesson 1 Distinguishing Between Developed and Developing Countries: An Introduction
- Lesson 2 Using Statistical Indicators to Measure Economic Development
- Lesson 3 Stages of Economic Development
- Lesson 4 Economic Development from a Personal Perspective
- Lesson 5 Agriculture and the Food Supply
- Lesson 6 The Population Issue

Teaching Strategies: Junior High School Level
- Lesson S2 The Shoe Industry
- Lesson S7 Help for the Shoe Industry

Teaching Strategies: World Studies
- Lesson 7 Patterns of Economic Development
- Lesson 8 Less Developed Economies
- Lesson 11 Protectionism in Foreign Trade

Teaching Strategies: U.S. History
- Lesson 6 Interregional Trade
- Lesson 13 United States and International Trade: Government Regulation of Foreign Trade

Teaching Strategies: Using Economics in Social Studies Methods Courses
- Lesson 4.5 Trade-Offs of Trade

Teaching Strategies: Consumer Economics
- Lesson 1-5 Who Does What—A Household Dilemma

Income-Outcome$ (computer-based series)
- International trade simulation

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A FRAMEWORK FOR TEACHING THE BASIC CONCEPTS

TEACHING STRATEGIES:

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Junior High School Level (Grades 7–9)

Basic Business and Consumer Education (Secondary)

Consumer Economics (Secondary)

High School Economics Courses

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World Studies (Secondary)

Using Economics in Social Studies Methods Courses (College Level)

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